

Innovative Design in Real Estate for the Elderly Person

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Abstract

At present, Thai society tends to have more elderly people, causing new needs. with more in the real estate business, it's the same. Real estate developers have to design and invent different living styles and equipment within houses and projects to be in line with those needs. But not everything can be done easily or immediately. Some things require a high construction budget, and some things require careful learning and development in stages. This article will point out the promoting factors and advantages in order to create more use of this innovation. It also points out various concerns. Including steps to control the adoption of this real estate innovation. Applied to the elderly, be careful and There are possibilities in the social sector, architecture, and economics as well.

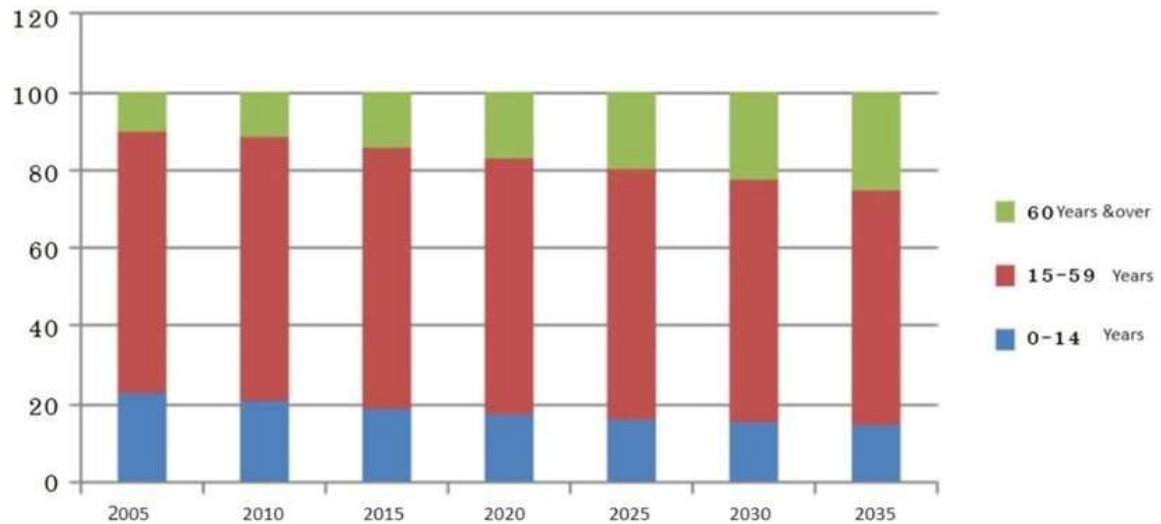
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Introduction

The trend of an aging society, characterized by a growing proportion of elderly individuals in the population, is a global phenomenon. This demographic shift is driven by factors such as increased life expectancy, declining birth rates, and the aging of the Baby Boomer generation in many countries. Increasing Median Age is one of the most evident trends in the rising median age of populations. As people live longer and birth rates decline, People are living longer today. The average lifespan has increased over the past decade because they are healthier living, better treatment, and preparations and hygiene that have almost eradicated many fatal infectious diseases. The median age of a country's population tends to increase over time. They also have longer life Expectancy: Advances in healthcare, nutrition, and living conditions have led to longer life expectancies. Many people are living well into

their 70s, 80s, and beyond. In Thailand, we also follow this trend as well. The country has many more elderly increasing from year to year.

Figure 1 Ratio of child vs adult vs elderly 2005 – 2035



SOURCE : Institute for Population and Social Research, Mahidol University, Thailand

It can be seen that in 2005 the Thai population over the age of 60 will have a proportion of more than 10% and the rate will continue to increase until in 2025 or another 20 years there will be people over the age of 60 with a proportion of 20%. which takes very little time compared to the rate of increase in the elderly until the social conditions, economic conditions, environment, care system, and various equipment systems used in housing for young people nowadays cannot support Elderly people in time

The aging society has economic implications, as older individuals often require healthcare services, pensions, and long-term care. Governments and societies are grappling with how to finance these needs.

There is a greater demand for healthcare services, particularly in areas related to chronic diseases and age-related conditions. This has implications for the healthcare industry, including increased demand for geriatric specialists and long-term care facilities. Seniors often have unique housing needs, such as accessible and age-friendly housing, retirement communities, and assisted living facilities. This trend is influencing the real estate market.

Overall, the trend of an aging society presents both challenges and opportunities for societies, governments, businesses, and individuals. It requires thoughtful planning and

innovative solutions to ensure that the needs and contributions of older adults are recognized and addressed effectively.

The elderly needs more help

Elderly individuals often require more help and support for a variety of reasons, primarily related to the natural aging process and the potential onset of age-related health conditions. As people age, they may experience physical limitations, such as reduced strength, mobility, and flexibility. These changes can make it challenging to perform everyday tasks independently, such as dressing, bathing, or preparing meals. They have experienced some disabilities such as Cognitive Changes, Cognitive decline can occur with aging, leading to memory loss, difficulty with decision-making, and confusion. Individuals with cognitive impairments, such as Alzheimer's disease or other forms of dementia, often require significant assistance with daily activities and safety. Elderly individuals are more likely to have chronic health conditions, such as diabetes, heart disease, arthritis, or respiratory issues. Managing these conditions can involve complex medication regimens, dietary restrictions, and regular medical appointments.

Vision and Hearing Loss are common effects that happen to them, Age-related vision and hearing loss can create communication barriers and safety concerns. Elderly individuals may need help with reading, communication, and using assistive devices. It also causes physical injuries; therefore, safety Concerns should be considered. Falls and accidents become more common as people age. To prevent injuries, elderly individuals may require assistance with home modifications, mobility aids, and supervision.

However, the elderly's daily life routine still needs to mobilize both indoor and outdoor space. Transportation is a crucial factor for them. Mobility can decline with age, making it difficult to drive or use public transportation. Older individuals often need help with transportation for medical appointments, grocery shopping, and other essential errands.

It's important to note that the level of help an elderly person need can vary widely from one individual to another. Some older adults may remain highly independent, while others may require extensive assistance. Family members, caregivers, and community services often play vital roles in providing the necessary support to ensure that elderly individuals can maintain their quality of life and dignity as they age.

The concern of older people when living in their house.

Older people often have specific concerns and considerations when it comes to living in their own homes, especially as they age. These concerns can vary from individual to individual.

Older adults may worry about safety hazards in their homes, such as tripping over rugs or stairs. Falls are a major concern as they can lead to serious injuries. Installing grab bars, and ramps, and removing hazards can address these concerns. As mobility may decline with age, accessibility becomes a significant concern. Older individuals may have difficulty getting in and out of the house, using the bathroom, or reaching high shelves. They often look for home modifications or features that make daily tasks easier.

Social isolation and loneliness can be major concerns for older adults, particularly those who live alone. They may worry about feeling disconnected from friends and family or having limited opportunities for social interaction. Older adults may require regular medical care or assistance with medications. Being close to healthcare providers or having reliable transportation to medical appointments can be a concern. Some older adults may no longer drive, which can limit their ability to run errands or visit friends and family. Access to public transportation or alternative transportation options is a concern.

Moreover, keeping up with home maintenance tasks, such as yard work, cleaning, and repairs, can become more challenging with age. Older individuals may worry about how to maintain their homes or the cost of hiring help. Older individuals may be more vulnerable to scams or home invasions, so home security and personal safety become paramount concerns. Many older adults express a desire to age in place, meaning they want to remain in their homes as they get older. Concerns may revolve around whether their current home can accommodate their evolving needs. Older individuals may have strong emotional attachments to their homes due to decades of memories. Deciding to move or sell can be emotionally challenging. Having a support system in place is crucial. Older adults may worry about who will help them with tasks, provide emotional support, or offer assistance in emergencies. Access to essential services like grocery stores, pharmacies, and medical facilities is important. Older adults may be concerned if they live in areas with limited access to these services.

Addressing these concerns often involves a combination of home modifications, support from family and community resources, and thoughtful planning for aging in place. Many seniors find comfort and independence in their own homes by proactively addressing these concerns and seeking assistance when needed.

Age-friendly design

Age-friendly design, also known as universal design or inclusive design, Real estate business is a business that requires knowledge. with the characteristics of a great combination of science and art in various fields (Multidisciplinary) (Peiser & Frej, 2007, p. 1; Peca, 2009, pp. 30-36) refers to the creation of environments, products, and services that are accessible, usable, and accommodating to people of all ages, abilities, and backgrounds. The goal of age-friendly design is to ensure that spaces and products are user-friendly and can be comfortably and safely used by everyone, regardless of their age or physical capabilities. Age-friendly design prioritizes accessibility to accommodate people with mobility challenges, such as those who use wheelchairs or walkers. This includes features like ramps, wide doorways, and step-free entrances. Safety is a top concern. Design elements focus on preventing accidents and falls, including slip-resistant flooring, handrails, well-lit pathways, and secure footing.

- Ease of Use is one of the Age-friendly designs that are intuitive and straightforward, reducing the need for complex instructions or special skills. This benefits people of all ages, including older adults who may have cognitive or sensory impairments. Moreover, Spaces and products should be flexible and adaptable to meet changing needs. For example, a room designed with adjustable shelving can easily transform from a nursery to an office or accommodate various storage needs.

- Comfort is a critical consideration. Age-friendly designs aim to provide ergonomic furniture, adequate seating, and appropriate cushioning to enhance comfort and reduce physical strain. Adequate and well-distributed lighting is crucial for visibility and safety. Age-friendly designs incorporate ample natural light and well-placed artificial lighting to minimize glare and shadows. Clear Signage and Wayfinding: Clear and legible signage, with easily understandable symbols and text, helps people navigate spaces more easily. This is especially important for older adults who may have vision impairments.

- Technology Integration: Integration of technology, such as voice-activated controls or smart home features, can enhance accessibility and convenience for older adults. During the next decade, the Internet of Things (IoT) is poised to change the way we go about our daily lives, with projections of over 50 billion connected devices by 2020, compared with the 7 billion devices just six years previously (Bagley, 2014).

- Affordability: Age-friendly design should be practical and affordable. It should not add unnecessary costs to construction or product development.

- **Social Inclusion:** Age-friendly design promotes social inclusion by creating spaces that encourage social interaction. This can include seating areas, community gardens, and communal spaces that foster a sense of belonging.

Age-friendly design is applicable to various settings, including homes, public spaces, transportation systems, healthcare facilities, and more. It acknowledges that as people age, their physical and cognitive abilities may change, and the environment should adapt to accommodate those changes. Ultimately, age-friendly design benefits not only older adults but society as a whole by creating inclusive, accessible, and welcoming spaces and products for people of all ages and abilities. It promotes independence, quality of life, and social inclusion while minimizing barriers and challenges.

Innovative design in real estate for elderly persons,

It often referred to as "age-friendly design" or "universal design," aims to create spaces that are safe, comfortable, and accessible for individuals as they age. Here are some innovative design ideas and features that cater to the needs of elderly residents: The proper definition of innovation means the application of ideas to create more valuable developments. (George, James & Kimberly, 2005, pp. 72-91)

- **Universal Accessibility:** Universal design principles incorporate features like zero-step entrances, wider doorways, and hallways to accommodate wheelchairs and walkers, and lever-style door handles for ease of use. If the home has stairs, a stair lift or ramp can make it easier for elderly individuals with mobility issues to navigate between floors. An adjustable bed can provide customized comfort and support for seniors with mobility or health issues. A handheld showerhead can make bathing easier for those with limited mobility. A phone with large buttons and easy-to-read displays can assist with communication. Tools with ergonomic handles or grips that are easier to hold can be useful for tasks like opening jars or turning keys.

Open Floor Plans: Open layouts with minimal obstructions provide better mobility and reduce the risk of tripping. It also allows for flexible furniture placement. With the updated widespread internet, Integration of smart home technology allows for voice-activated controls, monitoring systems, and alerts for safety and convenience. Business Insider expects the number of smart-home devices shipped to grow from 83 million in 2015 to 193 million in 2020 (Meola, 2016).

- **Non-Slip Flooring:** Use of slip-resistant flooring materials, especially in bathrooms and kitchens, to reduce the risk of falls. Installing non-slip flooring or using non-slip mats and

rugs can reduce the risk of slips and falls. Well-placed task lighting in work areas like the kitchen and bathroom improves visibility for seniors with poor eyesight. Motion-activated lighting can increase visibility at night and reduce the risk of tripping in dark areas of the home. Curbless showers with built-in seating and handrails provide easy access for individuals with mobility challenges. Lever Faucets and Touchless Fixtures: Lever-style faucets and touchless fixtures are easier to operate for those with arthritis or limited hand strength.

- **Walk-In Tubs:** Walk-in tubs with built-in grab bars and hydrotherapy options offer a safer and more comfortable bathing experience. Installing grab bars in the bathroom near the toilet and in the shower or bath can help with stability and prevent falls. A shower chair or bench allows older adults to sit while showering, reducing the risk of slips and falls. A raised toilet seat makes it easier for older adults to sit down and stand up from the toilet.

- **Elevators or Chair Lifts:** In multi-story homes, elevators or chair lifts can enable access to upper floors without the need for stairs. Lift chairs are recliners that help elderly individuals stand up by gently lifting them to a near-standing position

- **Adjustable Countertops:** Height-adjustable countertops in the kitchen and bathrooms allow residents to choose a comfortable working height. Lowering or raising kitchen appliances to a comfortable height and installing pull-out shelves can make the kitchen more accessible. Wider Staircases with Handrails, If stairs are necessary, they should be wide and equipped with handrails on both sides for support. Reaching tools with extended handles can help elderly individuals grab items from high shelves or low cabinets without the need for bending or straining.

- **Accessible Outdoor Spaces:** Accessible outdoor features like ramps, raised garden beds, and well-lit pathways encourage outdoor activity and mobility. Depending on mobility needs, a wheelchair, walker, or cane can provide support and assistance with moving around the home. Aging-in-Place Features: Incorporate features such as reinforced bathroom walls for future grab bar installations and adaptable spaces that can serve different purposes as needs change.

- **Multi-Generational Living Spaces:** Designs that allow for the integration of live-in caregivers or family members, while maintaining privacy and independence for all. Community Amenities: In senior housing communities, amenities like fitness centers, social spaces, and transportation services can enhance the quality of life for residents.

- **Natural Lighting:** Maximizing natural light through larger windows and skylights can improve visibility and mood. **Color Contrast:** Using color contrast for elements like countertops, flooring, and handrails can aid those with visual impairments in identifying different areas. **Sound Control:** Noise-reducing materials and layouts that minimize sound transmission can create a quieter and more comfortable living environment.

- **Emergency Response Systems:** Pre-installed emergency call systems or panic buttons for immediate assistance in case of emergencies. Bed rails can assist with getting in and out of bed safely and provide additional support during sleep. A personal emergency response system (PERS) allows elderly individuals to call for help in case of a fall or medical emergency.

Innovative design for elderly individuals in real estate focuses on blending aesthetics with functionality to create spaces that promote independence, safety, and high quality of life as people age. These design principles not only benefit older adults but also offer inclusive living environments for people of all ages and abilities. Several important equipment and home modifications can enhance the safety, comfort, and independence of elderly individuals living at home. The specific equipment and modifications needed will depend on the individual's mobility, health, and living situation. It's advisable to consult with a healthcare professional or occupational therapist to assess the unique needs of an elderly person and make appropriate recommendations for their home environment. Additionally, regular safety assessments and adjustments may be necessary as an individual's needs change over time.

Real estate business has to adapt their design for aging society

Real estate businesses have compelling reasons to adapt their designs to accommodate an aging society. Here are some key motivations for doing so:

- **Market Demand:** As the population ages, there is a growing market of older adults looking for housing that meets their changing needs. By adapting designs to cater to this demographic, real estate businesses can tap into a significant and expanding customer base.

- **Competitive Advantage:** Real estate developers who proactively design properties that are age-friendly gain a competitive advantage in the market. They can differentiate themselves by offering homes that meet the unique requirements of older adults.

- **Extended Occupancy:** Age-friendly designs enable older adults to age in place, which means they can stay in their homes longer without the need for costly modifications or

relocation to specialized facilities. This extended occupancy benefits both property owners and developers. This will also support Financial Sustainability ensuring that homes are suitable for aging occupants and can prevent unexpected costs and property devaluation. Retrofitting properties later to accommodate elderly residents can be more expensive than incorporating age-friendly designs from the start.

- **Community Integration:** Age-friendly design fosters inclusive communities where people of all ages and abilities can live together. This can contribute to social cohesion and a sense of belonging, making the neighborhood more attractive to prospective residents.

- **Legal Compliance:** In many regions, there are building codes and regulations that mandate accessibility features in residential properties, especially in new constructions. Adapting designs for an aging society ensures compliance with these legal requirements.

- **Enhanced Property Value:** Homes designed with age-friendly features, such as wider doorways, zero-step entrances, and accessible bathrooms, tend to have higher resale values. Buyers are often willing to pay more for such properties. This will also reduce Vacancy Rates. Properties that are adaptable and suitable for aging occupants are less likely to experience long vacancies. They appeal to a broader range of potential tenants or buyers. The developer also reaches higher creditability in Community Reputation. Real estate businesses that prioritize age-friendly design contribute to a positive community reputation. This can lead to better relationships with local authorities and community organizations, which can be beneficial in the long run., Through investigating a sample of 470 apartments located in the area around Atlanta (USA), Benjamin et al. (2006) found that higher reputations provide landlords with higher rent values.

Social responsibility also requires a responsibility towards the future and towards the future of society, because of implications for other members of society both now and in the future, Crowther, D., & Aras, G. (2008). Many companies recognize the importance of corporate social responsibility. Incorporating age-friendly designs into real estate projects demonstrates a commitment to creating positive social and environmental impacts. In terms of Economic Benefits, Age-friendly design can stimulate economic activity by creating jobs in construction, design, and related industries. It also supports local businesses by attracting older residents who spend on goods and services. To achieve sustainable development, Age-friendly designs often incorporate sustainable and energy-efficient features, contributing to environmental sustainability and reducing utility costs for residents Moreover, the concept of Green Building

and Energy Efficiency are the future approach. Incorporating sustainable and energy-efficient features not only reduces utility costs but also contributes to a healthier living environment.

In summary, adapting real estate designs for an aging society is a smart business strategy that not only addresses the needs of a growing demographic but also offers financial, competitive, and societal advantages. It aligns with the principles of inclusivity, sustainability, and social responsibility, which are becoming increasingly important in the real estate industry. Therefore, continuous development to create new innovations is an important thing that cannot be avoided (Schermerhorn, Hunt & Osborn, 2003)

Conclusion; Aging society may impact on real estate industry

The aging society has significant implications for the real estate industry. As populations in many countries around the world continue to age, now and near future there is a highly Increased Demand for Senior Housing With a larger elderly population, there is a growing demand for senior housing options such as retirement communities, assisted living facilities, and nursing homes. Real estate developers are responding to this demand by constructing more senior-focused housing developments. Many older adults prefer to age in place, which often requires home modifications to make their residences more accessible and safer. This creates opportunities for contractors and service providers specializing in home renovations and accessibility features.

Accessible Design is a key factor for elderly homes called Universal design principles, which aim to make spaces accessible to people of all ages and abilities and become more critical in real estate. Properties designed with features like wider doorways, no-step entrances, and accessible bathrooms are in higher demand. In some cases, there is a demand for Multi-Generational Housing. Some aging individuals and families are opting for multi-generational housing arrangements to provide mutual support. Real estate developers may need to consider designs that accommodate multiple generations living together comfortably. The aging population often requires more healthcare services. This can lead to increased demand for medical office spaces, clinics, and healthcare facilities, potentially impacting the commercial real estate sector. Seniors may rely more on public transportation or proximity to essential services like healthcare facilities, grocery stores, and recreational activities. Properties located in areas with good public transportation and essential services may become more desirable. Real estate investors may seek opportunities in properties catering to senior living, healthcare, or aging-in-place services. These sectors can offer stable and long-term investment

potential. Housing Downsizing: As some older adults become empty nesters or find their current homes too large to maintain, there may be an increase in demand for smaller, more manageable housing options, such as condos or smaller single-family homes. Also, research shows that older homeowners tend to "downscale" housing by reinvesting less in renovations and maintenance (Davidoff, 2006).

Legal and Regulatory Considerations: An aging society may lead to changes in zoning regulations and building codes to accommodate the needs of older adults. Real estate developers and property owners must stay informed about evolving regulations. Along with Community Design, Communities may place a greater emphasis on age-friendly urban planning and design to encourage social interaction, walkability, and accessible infrastructure. In a wide perspective, Property Maintenance Services is also important. The need for property maintenance and management services for elderly homeowners may increase. Services like lawn care, snow removal, and home repairs become more critical as homeowners age. All of the above have driven the present market more dynamically than in the past. The overall dynamics of the real estate market can be influenced by an aging society, affecting property values, rental markets, and investment strategies.

In summary, an aging society is reshaping the real estate landscape by driving demand for senior housing, accessible design, healthcare facilities, and other related services. Real estate professionals and developers need to adapt to these changing demographics and consider the unique needs and preferences of older adults when planning and investing in properties.

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