

Introduction

In the words of one of our greatest social anthropologists William Shakespeare, *'people are happiest when they are in their homes'*.

Our homes are more than merely a place to reside; they fulfil an essential human need. Where and how we choose to live is influenced by diverse factors such as family, availability of work, access to education, affordability and availability of community and essential services.

Regardless, we all aspire to live well, to experience a sense of connectedness to our family, friends and community, and enjoy a quality of life, which enables us to engage in our lifestyle of choice.

The aim of the Churchill Fellowship is to investigate the planning, design and implementation of 'universal housing' in Japan, Canada, USA, UK and Norway. Universal housing or 'housing for all' is an approach to the design, construction and adaptation of standard housing to meet the needs of all home owners regardless of age, ability, or social situation. Internationally, this concept is achieving reasonable success in the public or social housing market; however, its application for private dwellings has met with resistance.

Known as 'Lifetime Homes' in the UK, 'Flexhomes' in Canada, 'Universal Housing' in the USA and 'Lifecycle Housing' in Norway the Fellowship seeks to investigate the influence of legislative, cultural and social factors on the universal housing concept and, to highlight examples of innovation.

Living well is not achieved through housing alone. For people to be independent our homes need to be well located and enable us to access essential services within our community. Our ability to support people at home is crucial to maintaining health and quality of life and is an essential component in the planning, design and implementation of universal housing initiatives internationally. Themes such as 'healthy ageing' and sustainable community development are also discussed within this Fellowship report.

In conducting the Fellowship Government departments, building research institutes, educational, health, housing associations and various universal housing initiatives were visited in Japan, Canada, USA, UK and Norway during May – August 2004. The diversity of the twenty-seven locations visited provides a unique insight into universal housing initiatives and the political, cultural, and social influences, which have, and continue to impact on housing policy in each of the respective countries.

Introducing the Universal Housing concept

Living in a quality-designed home that is accessible, affordable, and attractive is a central theme in our lives and essential to our sense of well being and community. In reality, we build and buy our 'dream homes' for a 'Peter Pan' population - people who never get older, never have accidents or injuries, never acquire a disability or have family who are affected by disability. In designing for the modern world, we seem to have overlooked the essential human condition that our needs *change* over time.

Today, seniors are ageing better and generally living well in their post retirement years. They are also living longer with varying levels of impairment and disability and surviving more serious illnesses and accidents. Significant trends in the causes of disability highlight the need for home dwellings to provide greater flexibility to accommodate our changing life circumstances.

Do we currently design our homes for the future?

Homes we build today are still going to be in use in 25 years. According to the United Nations (2001), by 2025, the proportion of people aged 65 and over most in industrialised nations will represent nearly 1/3 of the population.¹ Studies indicate our ageing population wish to live in their community of choice, in a house that accommodates their needs for as long as possible.

Japan has the most rapidly ageing population in the world. This equates to 37.5 million people over the age of 65 and will result in there being more seniors than children by 2020.²

The rapidly increasing ageing population is not reserved for Japan it is a universal phenomenon. In the European Union, people aged over 65 currently represent nearly 75 million citizens. The significance of this population trend cannot be underestimated nor the challenge this will place on communities to ensure our homes are 'future proofed' to accommodate changing needs.

Disability takes on many forms. Research indicates that quality-designed housing is crucial to enabling people with disabilities to enjoy and access employment, education, social activities, leisure and other everyday services.

About 10 per cent (37 million) of Europe's 370 million adults and children have a disability and 10 per cent of them (3.7 million) have a severe disability. Studies indicate that one in four households in industrialised nations has a family member affected by disability.³ Many families who have children with a disability face serious stress in finding a suitably accessible

¹ United Nations. (2001). *World Population Prospects: The 2000 Revision*. New York: United Nations.

² Bass, S. (1996). Introduction: Japan's Ageing Population. *Journal of Ageing and Social Policy*, 8(2/3), 1-23.

³ Eurobarometer survey 54.3 and Eurostat report: *Disability and social participation in Europe, 2001 edition*.

home. Standard housing is not designed or constructed to accommodate accessible design and affordability is often compromised to ensure access to health services.⁴

Current housing trends

The ageing baby boomer population continues to represent the largest single influence on housing trends. Industrialised nations acknowledge that in the next 20 years between 20 – 30 percent of the population will be retired baby boomers.

In Australia, Canada, USA, UK, Japan, and Norway the housing trends of the elderly will have a significant impact on the living and housing options.

A move towards universally designed housing is supported as:

- large percentage of the post-war baby boomer population will be moving out of the 20-59 age group into semi-retirement as soon as 2007,
- almost a third of all households in European countries are expected to be non-family households consisting of couples aged 55 and over by 2015.⁵
- most baby-boomers are living at least 20 years past retirement, nearly twice as long as 25 years ago,
- more people are surviving permanently disabling conditions and living with progressive or chronic illnesses,
- more families are seeking suitable housing options as children survive previously fatal birth defects and childhood illnesses,
- more government support for 'age-in-place' agendas.

What is universal design and how does it apply to housing?

Universal design is an approach to housing based on the philosophy that homes should be designed and constructed to accommodate the diverse needs of homeowners. Universal design does not provide a prescription for practice, nor is it accompanied by technical specifications or building regulations.

Beyond the housing structure itself, it refers to the process of incorporating a range of design, construction and attitudinal refinements to create a living space which:

1. meets the needs of people across a range of abilities and ages
2. meets the changing needs of its owners over time (i.e. age, disability, family changes, caring for ageing parents)
3. is well integrated within the community

⁴ Beresford, B., Oldman, C. (2003). *Housing matters: National evidence relating to disabled children and their housing*. Oxon, UK: The Policy Press.

⁵ Randall, B. (2003). *Breaking down the barriers: Social housing for people with disabilities in Europe*. Brighton UK: CECODHAS European Liaison Committee for Social Housing.

4. adapts to respond to the economic needs of its owners both now and in the future
5. enables home owners to occupy dwellings for longer periods through improving the “convenience” a home can offer
6. incorporates functional features which are aesthetically compatible with housing expectations
7. incorporates features that add quality, marketable features to a home

It supports the philosophy that living environments should be useable by all people, to the greatest extent possible, without the need for significant adaptation or customisation.

E-quality - Comparing political rhetoric for inclusive design

The home dwelling still exists as the last frontier for inclusive design. Inherent in central government policy for these countries is the notion that people, regardless of age, ability, race or sex should be afforded equitable access in areas such as employment, education, government programs, public buildings and housing.

The International Year of the Disabled in 1982, and the growth of independent living movements have supported this ‘new think’. Shifting from a medical to a social view of disability government, industry and community now more readily acknowledge their collective responsibility in facilitating inclusive access for people with disabilities.

Globally, the growing ageing population has, and continues to, represent a significant sector of the disability population statistics. Traditionally, government policies for the aged have focused on the dependent aged with a lesser focus on preventative health for those ageing well in the community.

Research suggests that ageing seniors and people with disabilities, who live in suitable housing, maintain greater community, social and employment independence and are less reliant on health, care and welfare services.⁶

The notion of ‘healthy ageing’ although is still quite a new concept.

⁶ Pollak, P. (1999). *Liveable communities: An evaluation guide*. Washington DC: American Association of Retired Persons (AARP).

Japan: Dealing with a 'third age' phenomenon

Inclusion through universal design is a recent phenomenon in Japan. For the government, the move to an ageing society was not recognised until the 1981 census which indicated that close to 35 million Japanese would be aged 65 and over by the year 2020.⁷ Faced with a significant housing and social care crises, in 1989 the Japanese government announced a comprehensive plan for the future health and welfare of its seniors entitled, a *Ten Year Strategy to Promote Health Care and Welfare for the Aged* also known as the 'Gold Plan'.

Supported by compulsory lifetime care insurance (LTC) the Gold Plan supported the development of home care services, higher quality community services and facilities and nursing home places for ageing seniors.

Design Guidelines for Dwellings for the Ageing Society

In 1995, the Ministry of Construction introduced the *Design Guidelines for Dwellings for the Ageing Society*. The introduction of these guidelines supported the Minister's Cabinet Goal (2001) to keep 90 percent of Japan's seniors ageing in place.

The adoption of the *Design Guidelines for Dwellings for the Ageing Society* (1994) as the basis for a preferential home loan interest rate highlights the HLC role in supporting universally designed housing. Whilst statutory compliance with the design guidelines is not essential, the preferential loan system continues to provide strong incentives to new homeowners to incorporate universal design.

Government programs designed to improve the quality of housing construction have supported the introduction of universal housing features in standard dwellings. Both Norway and Japan have utilised falling housing quality as the springboard to introduce universal design features in standard housing. In 1999, the Housing Quality Indication System (HOIS) was introduced as part of a strategy to improve the standard and marketability of the standard multi-family housing.

The Japanese Housing Loan Corporation has used the quality-housing index as the basis for subsidised home loan interest rates. Linking accessibility with quality housing features such as durability, energy efficiency, and affordability has popularised accessibility and lead to greater acceptance in the general housing market.

Private financial institutions have now entered the housing mortgage market offering competitive rates without the accessible design prerequisites of the Housing Loan Scheme. Despite alternative loan options being available to Japan's homebuyers, currently 60 percent of Housing Loan Corporation applicants are choosing to comply with the accessibility requirements.⁸

⁷ Kose, S. (1997). Housing elderly people in Japan. *The Journal of the International Federation of the Ageing*. Winter/Spring, 146-163.

⁸ Kose, S. (2003, May 25). *Interview, Shizuoka University of Art and Culture, Hamamatsu, Japan.*

The latest phase – ‘General Principles Concerning Measures for the Aged’

Financial incentives to prospective homeowners have clearly influenced the implementation of universal housing principles in standard housing. It is evident that accessibility through universal design has achieved general recognition as a quality improvement in housing.

Currently the *General Principles Concerning Measures for the Aged* reflect the most substantial move towards integrated health, welfare, and housing in Japan. Specific to housing the Principles aim to:

- improve housing standards, diversify housing styles and introduce welfare measures to support people in daily life,
- introduce a loan system to enable families to construct and extend their homes to accommodate elderly parents,
- ensure at least 20 percent of new housing be built to the ‘*Design Guidelines for Dwellings for the Ageing Society*’,
- ensure a further 20 percent of housing be renovated to meet ‘barrier free’ requirements of individuals in the community
- support the creation of public rental housing for the ageing population.

Financial incentives promoting universal design

Home manufacturers are responding to the market by incorporating ‘universal housing’ options in new housing designs. As in Norway, universal home design is achieving greater market acceptance by linking accessibility with quality design. The provision of economic incentives to homeowners and builders is also improving the marketability of flexible, accessible housing in Japan.

Canada: Supporting sustainable development

The demographic imperative to integrate universal design in housing is evident considering the growing ageing baby boomer population.

In the next 10 years the number of people aged over 65 is set to double from 4 million to 8 million, with at least 50 percent of all Canadian households headed by people aged 55 and over.⁹

These households will generally consist of people who are singles or ‘empty nesters’ couples whose children have moved out of the family home. According to the Canadian Mortgage and Housing Corporation with fewer homes being built in Canada, housing which

⁹ Canadian Mortgage and Housing Corporation. (1999). *Flexhousing: Homes that adapt to life’s changes*. Canada: Author

incorporates flexible housing features to accommodate the differing requirements of occupants' easily and inexpensively, will be in high demand.

Government legislation

Government policy combined with human rights and building code legislation supports the implementation of universal design. Barrier-free design provisions are inherent within the National Building Code of Canada. However the provisions are most evident in the public arena with limited impact on private housing development. For the majority of Canadians, living in, or intending to build, a dwelling there is no imperative to consider universal housing principles.

Flexhousing – A key government initiative

The Flexhome concept, developed by the Canadian government's national housing agency, introduced a marketable step towards generalising 'universal housing' in Canada.

In recognition of the changing social, domestic and employment situations of Canadians, the Flexhome concept proposes a new approach to home design, renovation and construction. Incorporating the four key principles of adaptability, accessibility, affordability and healthy housing, a 'universal home' has been on-sold to consumers as a quality improvement to traditional housing design.

Further Flexhousing has been touted as a sustainable financial housing option for young professionals, families, seniors and even first time homebuyers.

Flexhousing is marketable, however there are no statutory requirements, within either the Canadian Building Code or Human Rights legislation, for home dwellings to be built to the Flexhome standard.

Legislative and building code confusion, coupled with a lack of financial incentives, has limited the development of Flexhousing to the social housing sector with little impact on the standard living arrangements of everyday Canadians.

Provincial governments in Canada are recognising that Flexhousing supports sustainable development through permitting higher density living.

In Vancouver, until 1986, the creation of a secondary dwelling within a single family home was against city bylaws. Rising housing costs and a shortage of affordable rental led to numerous homeowners installing 'accessory units' in their homes despite the bylaws. The city responded by supporting the creation of secondary units within a residential home, a housing concept known as 'Convertible Housing' or Flexhousing.

The accessory suite regulation has created safe and healthy accommodation whilst supporting higher density living in established neighbourhoods without changing the appearance or feel of a community.

According to the CMHC, the creation of accessory suites within existing homes and new home construction supports 'healthy communities' by permitting well designed, in-fill developments.

Accessory suites have clear benefits for the community, achieving higher densities within a typical urban lot with only minimal adaptation to traditional housing practices. The appeal of Flexhousing is universal as:

- first time home-owners can rent out the accessory suite as a mortgage helper,
- owners can reclaim the suite as their family grows,
- owners can offer the suite as a home office or utilise this space for a home based business,
- owners can modify the suite for ageing parents; and
- ageing owners can rent out the suit to supplement retirement income.

CMHC cost benefit research indicates designing and building a home with Flexhousing features usually costs no more than conventional home. Whilst some features are slightly more expensive than standard building materials and construction techniques, costs are recouped over the long term as pre-engineered features allow for easy and inexpensive change and renovation.

A recent evaluation of the Richmond Demonstration Flexhome, further highlighted the cost benefits of the Flexhousing design principles. A survey of visitors to the Richmond Demonstration Flexhome rated flexible design as the most desirable feature of the demonstration home, specifically the ability to convert the dwelling to create an accessory suite.¹⁰ Without government policy and regulation, the development of Flexhousing will continue to be reliant on developer initiatives.

United States: A rights based philosophy

The United States shares the phenomenon of an ageing baby boomer population. By 2040, nearly 1/3 of the USA population will be over the age of 65, with the number of the elderly aged over 75 years increasing even more rapidly¹¹. The substantial USA baby boomer population represents the most significant influence on current and future government policy.

The growing demand for more accessible and easily adaptable housing is apparent as nearly 90 percent of America's ageing seniors wish to remain in their present communities as they

¹⁰ Chan, C. (2003). *Richmond Flexhouse: Evaluation report*. Prepared for Canadian Mortgage and Housing Corporation.

¹¹ United Nations. (2001). *World Population Prospects: The 2000 Revision*. New York: United Nations.

age.¹² The national American Housing Survey (1995) estimated that almost 8.9 million households have at least one occupant who has a physical limitation. Further, nearly 3.4 million homes had some type home modification to improve ease and access. The case for universally designing homes cannot be clearer when it is considered that a third of these households had difficulty just accessing the entrance.¹³

Government legislation

Prior to the introduction of the *Americans with Disabilities Act* in 1990, the government had already acknowledged that persons with disabilities, of which many were elderly, faced substantial discrimination in accessing suitable well-designed housing particularly in the rental market.

In 1988, the introduction of the *Federal Fair Housing Amendments Act* (FHAA) extended coverage of the *Civil Rights Act* of 1968 to persons with a disability. The FHAA created accessible design and construction requirements for new multi-family housing of four or more dwellings built for first occupancy after March 1991.

The Fair Housing Amendments Act is unique, existing as the first law in history to combine civil rights protections with design and construction standards. A key stated purpose of the FHAA is to increase the number of multifamily dwelling units for residents with disabilities. Prior to introduction of the FHAA, Congress debate acknowledged that physical design barriers often denied people with disabilities and the elderly from access to housing that would ordinarily be appropriate and suitable.

Visitability – Moving towards universal design

Whilst universal design specifications are yet to be mandated in any USA State, visitability requirements have gained greater awareness and have been implemented in more than 25 localities countrywide in housing developments financed with public money.

Whilst most of the visitability laws are reliant on government mandates, incentive and voluntary visitability programs have begun to spread across the country.

Visitability incorporates features to be used by a guest with a disability as opposed to suitably accommodating the needs of a long term resident who has a disability. Visitability includes access to the entrance of the home, access to an entry level accessible toilet and washbasin and internal passages and doorways which accommodate wheelchair accessibility.

¹² Kochera, A. (2002). *Accessibility and visitability features in single-family homes: A review of state and local activity*. Washington DC: AARP Public Policy Institute.

¹³ USA Census Bureau. (2001). *Current population reports*, (pp.70-73). Washington DC: Author

What is the EasyLiving Home Program?

The Georgia based 'EasyLiving Home' program is a voluntary certification program designed to encourage builders of single-family homes, duplexes and triplexes to incorporate universally designed 'easy living' features. These features offer home buyers a range of features, which make a home more cost effective, attractive, visitable and convenient for everyone.

The latest phase – The 'Inclusive Home Design Act'

In addressing the disparities in housing, the USA Congress is seeking to introduce the *Inclusive Home Design Act*. Whilst the legislation is yet to be passed, the Bill proposes all newly constructed, Federally assisted single-family houses and townhouses, be constructed to meet minimum standards of visitability for persons with disabilities.

The *Inclusive Home Design Act* will require all newly built single-family homes, which receive Federal funding, to meet three specific accessibility standards: an accessible route, or 'zero step' into the home, 820mm clear doorways on the main level and one wheelchair accessible bathroom.

United Kingdom: Moving to Lifetime Homes

Demographic and housing trends

The UK faces an ageing population with the number of elderly people expected to rise from 10.5 million in 1992, to 16 million by 2032.¹⁴ As in the USA and Canada, the ageing demographic is most significant in the older aged, with UK elders over the age of 85 years rising to 1.3 million. T

he recent *Housing in England* report (2002/03), undertaken by the National Centre for Social Research on behalf of the Office of the Deputy Prime Minister (ODPM), indicates close to 65 percent of English households are owned and lived in by people aged 65 and over.¹⁵ The expected rise in elderly households has already begun to increase and this trend will continue due to the decline in traditional three generational families.

The Report indicated that the number of elderly people living alone is increasing as are the number of active 'empty nester' seniors. In the UK, the number of families who have a child or parent affected by disability is also increasing. These trends highlight the need for current

¹⁴ Falk, N., Rudlin, D. (1995). *21st century homes: Building to last*. London UK: URBED

¹⁵ National Centre for Social Research. (2004). *Housing in England 2002/3: A report principally from the 2002/2003 Survey of English Housing*, Prepared for the Office of the Deputy Prime Minister, London, UK: Queens Printer and Controller of Her Majesty's Stationary Office.

and future housing to be universally designed to accommodate natural ageing and changing life circumstances particularly as traditional home building in the UK has focused on developing 'starter' family homes.

Government legislation

Historically, the link between health, housing and welfare has featured as a core element in government policy and planning in the United Kingdom. As in most European countries, the ageing population in the UK has led to a greater emphasis on community based health and welfare initiatives.

The need to improve the quality of British housing is evident in the government's commitment to an 'ageing in place' agenda. In satisfying the growing demand for choice, flexibility, and independence in housing, universal housing principles continue to demand the attention of government policymakers.

Lifetime Home Standard

Principles encouraging the generalisation of quality designed, 'universal housing' entered the political agenda prior to the introduction of the DDA. The first collaboration on developing a standard measure to improve the accessibility of the common dwelling occurred in 1991 through the efforts of the Joseph Rowntree Foundation Lifetime Homes Group.

The Lifetime Home standards proposed sixteen key accessibility provisions, to support flexible home options for all. Until the recent 1999 revision of Part M of the Building Code, there was no national building code or human right requirement to incorporate any 'universal design' features in standard dwellings.

Previously, Lifetime Home provisions were only evident in some social housing schemes and supported living developments administered by non-for profit organisations and registered social landlords. The 1999 revision of Part M now requires 'visitability' provisions in all new home dwellings. Even more significantly, the language of Part M has changed from access provisions for people with disabilities to achieving 'access for all'. Unlike Norway and Japan financial incentive to encourage universal housing design are absent, however changes to the building regulations has supported the development of Lifetime Homes in the UK.

A recent review of the impact of Part M in housing indicates that whilst industry opposed the original 'visitability' requirements, overall the design changes have enhanced the market appeal of housing developments.¹⁶ Builders and developers concede that whilst there was an

¹⁶ Imrie, R. (2003). *The impact of part M on the design of new housing*. London, UK: Joseph Rowntree Foundation & Royal Holloway University of London.

increase in costs to develop housing to the Part M criteria, overall the market appeal offset costs. The report however indicated that meeting the Part M criteria was difficult in smaller housing developments where tighter margins often resulted in the need for a larger site. Further, sales agents indicated that the market response to Part M 'visitable' design features was often negative as prospective buyers often associated accessible design with the 'disabled population'.

Current review of Part M

In 2004, the Office of the Deputy Prime Minister (ODPM) announced a review of building controls, specifically the provisions for housing. The ODPM believe the existing Part M 'visitability' provisions could be strengthened by introducing Lifetime Home Standards for all new and converted houses. It is acknowledged that housing which sustains people in the community results in reduced expenditure for adaptations and residential care and costs associated with community care and rehousing due to disability or ageing. The ODPM will consider whether the Lifetime Homes Standards themselves require updating to reflect to current British Standard BS8300:2001 *Design of buildings and their approaches to meet the needs of disabled people – Code of Practice*. Other research will look at practical ways to deliver enough wheelchair accessible housing to meet local needs.

Sustainable London – The London Plan and lifetime homes

In Britain, Lifetime Homes standards are being touted as the key to fulfilling sustainable, higher density, inclusive community objectives.

Planning for higher density living is required across the UK, and the need for more affordable housing to meet the current and future demand has been identified.

The government has set a target of 200,000 new homes per year and the London Plan alone indicates a target of 23,000 homes per year until 2006.¹⁷

The future of housing in the UK is focused on sustainability and integration. Accessibility is seen to underpin both these values in the provision of quality housing design. In view of the growing ageing demographic, the increase in people living alone and the changing family structure, the need for well designed higher density living is evident. Greater density living, when well designed, has the potential to reduce social isolations and encourage a sense of community and independence.

An independent assessment of LTH standards in high density developments found their application did not conflict with the practical issues of required densities. In fact designing to

¹⁷ Greater London Authority. (2004). *Draft London Plan*. London, UK.

LTH standards delivered flexible housing choices and quality living space with little, if no, additional cost implications.¹⁸

The London Plan supports the integration of the LTH design principles into standard home construction. Under the Plan, all new properties will be built to the LTH Standards and a further 10 percent will be designed to be wheelchair accessible. The London Plan strongly supports the principles of Lifetime Homes, viewing universal housing as an essential part of the Plan's key objectives of social inclusion, sustainability, equality and diversity.

Quality housing promotes good health and supports people to live independently. Research indicates that building Lifetime Homes reduces the incidence of accidents at home and promotes health which in turn reduces the pressure on hospital and community based services. Lifetime Homes also support independent living which, as opposed to hospitalisation and health based rehabilitation, is the preferred option for government.

The London Plan also encourages London Boroughs to take steps to identify the full range of housing needs and investigate the desirability of establishing a London register of accessible housing in both the public and private sector.

Norway – A Step Ahead

The role of the Norwegian State Housing Bank

The implementation of national housing policy in Norway is primarily achieved through the Norwegian State Housing Bank. The Housing Bank is responsible for financing approximately 50 percent of existing homes in the country.

The Norwegian State Housing Banks dual role in both financing and implementing government policy is unique to Norway. The Bank's primary goal is to ensure that all people live in good housing environments. According to Husbanken's *2003 Annual Report*, the Housing Bank currently advocates that all housing should be universally designed in addition to being located within good residential environments.¹⁹ As the central financier of housing loans in Norway, the Bank believes that, provided the needs of the elderly and people with a disability are considered at the outset, the cost of incorporating functional design is minimal. This stands in the face of the substantial costs associated with improving and modifying traditional housing which has not been universally designed.

Norway pioneered the concept of a 'home for life' with the introduction of the 'Life Span Dwellings' standard in 1981. Developed through collaboration between the Norwegian Society for the Handicapped and the Norwegian Building Research Institute, the publication presents a concept for quality, adaptable and affordable housing design.

¹⁸ Cobbold, C. (1997). *A cost-benefit analysis of lifetime homes*. York, UK: York Publishing Services LTD.

¹⁹ The Norwegian State Housing Bank. (2003). *Annual Report*, Oslo, Norway: Author.

Financial incentives supporting inclusive home design

Various Husbanken initiatives have encouraged developers, builders and potential homeowners to incorporate universal design in standard dwelling design.

Initially, Husbanken provided incentives in the form of enhanced loans from the Housing Bank for dwellings that incorporated the life span home recommendations.

In 1996, Husbanken created a further incentive offering home loans at one percent lower than private institutions provided the life span requirements were met. That same year an additional incentive was provided in the form of a grant, which did not need to be repaid if lifecycle housing features were incorporated.

From 2005, the grant will be removed and all housing projects will need to incorporate the life span standards in order to qualify for a financial loan from Husbanken. Coupling central government housing quality aims with financial incentives has successfully lead to the broader acceptance and proliferation of 'universal housing' in Norway.

Potential savings of employing an inclusive design agenda

An inclusive housing agenda has immense financial and social savings for governments and the wider community. Creating living spaces which meet the needs of people with a range of abilities and ages, are capable of adapting to meet the changing needs of owners, are well integrated in the community and can be economically adapted to respond to the needs of its owners both now, and in the future, represents a new challenge.

According to the Japanese Cabinet Office's *Opinion Survey on National Life (2002)*, people derive the greatest sense of fulfilment from family and time spent enjoying their home life.²⁰ This sentiment is universal, and should be central to the development of housing policy. Quality housing, which is accessible, affordable, and capable of accommodating our changing circumstances whether it is a growing family, the addition of children, or ageing parents, is essential to living well.

Cost effectiveness of adaptable housing

Hill's (1999), study into adaptable housing assessed the cost impact and feasibility of adaptable housing design in Australia. As replicated in international studies, incorporating universal design features at construction incurred less than 1 percent additional cost to the development.

²⁰ Sagaza, H. (2003). Living arrangements of the elderly in Japan. In Japan Ageing Research Centre (Ed.), *Ageing in Japan 2003*, (pp. 105 – 120). Tokyo: Japanese Ageing Research Centre.

The long term savings for governments are considerable as are the potential reductions in home modification expenditures, if housing is designed with flexibility in mind. Hill identified a further six areas of potential savings including:

1. reduced need for the elderly and people with disabilities to move into residential care
2. reduced cost of rehousing people in more accessible housing
3. reduced government administration costs
4. savings in home care costs for elderly people and people with a disability
5. savings in health care costs; and
6. likely savings due to reduced falls in the home environment.

Hill's study reported that even if all new housing stock is designed to be adaptable, it will take over 50 years for adaptable housing design to filter through to the majority of dwelling stock. The potential savings for government, through supporting a universal housing agenda, were estimated at 255 million and over 30 years 1.471 million. The financial viability of adopting a national housing policy which supports adaptable housing design is clear.²¹

Conclusion

"We design buildings however it is true that once they are built, it is buildings that design us".

Sir Winston Churchill

We do not buy a house we buy a home. Our homes are not merely built structures they represent our sense of identity, satisfy our need for stability and security, offer a place of comfort, and connect us to a community. These essential elements of familiarity, security, suitability, and connectedness are even more crucial for people with a disability and ageing seniors in our community.

The benefits of a 'universally designed' home are not limited to the ageing population. Universally designed housing supports dual occupancy, home office conversion, ease of adaptation and the development of accessory suites as mortgage helpers particularly for younger and the elderly. These options are attractive to all potential homeowners.

The London Plan now requires all new housing be built to the Lifetime Home standards. Lifetime Homes are seen to address a wide range of social and economic policy agendas supporting the development of better quality, higher density living in London. The occupational benefits of functional home design support the plethora of workplace safety regulations for people involved in supporting people at home including home care workers, nurses, removalists, electricians, plumbers and builders.

²¹ Hill M, (1999). *Breaking into Adaptable Housing: A cost benefit analysis of adaptable homes*; paper presented at the 1999 ACT Adaptable and Accessible Housing Conference (Canberra).

All countries are facing an ageing phenomenon. The ageing baby boomers have just begun to exert their influence on government policy, planning, and design. This trend will continue as this population swells. Internationally governments have acknowledged the need to support an 'active' ageing agenda' for seniors. A renewed focus on community based services has also highlighted the functional limitations imposed on ageing seniors by traditional housing design. There is a clear link between health, housing, and independence. Whilst there is a growing market for quality, flexible housing design the following key question remains:

Why is 'universal design' not an essential requirement in all housing design?