



Certified smart and integrated living environments for ageing well

**D2.5-Innovation Analysis report**  
**Charting Europe’s Innovation Landscape**  
**for Age-friendly Housing**

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## Acronyms and abbreviations

AAL	Active Assisted Living
EIP AHA	European Innovation Partnership on Active and Healthy Ageing
DIY	Do It Yourself
EU	European Union
H4L	Homes4Life project
ICT	Information and Communication Technologies
TIS	Technological Innovation Systems
WHO	World Health Organisation
WP	Work Package



## Executive Summary

Throughout Europe a variety of innovative pilot projects – or 'experiments' – are being implemented to improve the life-course resilience of existing and newly built home environments. These experiments reflect the distinct socio-economic context of their locations and, more importantly, they provide a glance into potential future directions for the development of age-friendly homes. It is important to take stock of this diversity in order to get ideas about the range of home environments into which the Homes4Life certification scheme might be introduced and therefore about the flexibility required by the certification scheme when it is deployed throughout Europe.

This report provides an overview of 67 ongoing experiments in the domain of age-friendly housing. By focusing on four countries – the Netherlands, Poland, Ireland and France – we draw more detailed attention to some of these experiments. Overall, we find that, besides the variation between these countries, there is a more important type variation in terms of differences in the character of these experiments and the directions proposed by these experiments. Most of the associated innovations tested in age-friendly home experiments are not primarily material or technical, but primarily social or conceptual in character (i.e. new organisational or everyday practices that re-arrange social relations or new housing concepts that bridge the divide between ageing in place individually and a nursing home). This variety of innovations tested in the experiments has been categorized into seven distinct innovation pathways: (1) Showcasing Technology, (2) Innovation Ecosystem, (3) Sheltered Elite, (4) Specific Community, (5) Conscious Retrofitting, (6) Home Sharing and (7) Retrovation Challenge.

The array of experiments and future directions identified in this report provides insights into the different kinds of home environments that the Homes4Life certification scheme could encounter when made operational. Specifically, we highlight that in the development and application of the Homes4Life certification scheme, special attention to be paid to the following: (1) making the scheme flexible enough to assess the wide variety of innovative home environments that are part of very different innovation pathways; (2) dealing with potential misalignments between certain radical innovations and the application of a certification scheme; (3) formulating a communication strategy to articulate to added value of the certification scheme to innovators involved in experiments.

# 1 Introduction

## 1.1 Homes4Life

Our homes have a tremendous impact on our health and wellbeing, especially in later life. Ensuring that they are suitable and adaptable to people's needs and preferences as they age (so including when these needs and preferences evolve over time as we move forward in life) is an effective approach to respond to the challenges associated with the demographics of ageing in Europe. However, large parts of the existing building stock are not adapted to permit to older adults to age in place. The Homes4Life project addresses this challenge by contributing to the development of a new European certification scheme. This scheme will be geared to help assess and improve the life course resilience of existing and newly built home environments.

Throughout Europe there is a wide variety of visionary ideas and designs on how to achieve this. These 'good practices' are taking shape in the form of concrete initiatives. These initiatives (referred to as 'experiments' in this report) provide a glance into potential future directions for the development of age-friendly homes. It is important to take stock of this diversity in order to get ideas about the range of home environments into which the certification scheme might be introduced and therefore about the flexibility required by the certification scheme when it is deployed throughout Europe.

## 1.2 Aims and objectives of this report

This report provides an overview of ongoing innovative activities on the ground in the domain of age-friendly housing for various EU Member States. These innovations present potential solutions that are expressed in pilot projects – or 'experiments' – each reflecting the distinct socio-economic context of their locations as well as the variety of directions explored by stakeholders in these different places (different ownership and social structures of housing, different preferences and capabilities to deploy innovations, etc give rise to focal points for innovation). It is through this kind of concrete experimentation that different possible futures for age-friendly housing are being shaped. The diversity within this wide pallet of innovative activities will have to be taken into account to identify the flexibility required by the Homes4Life certification scheme.

The broad array of innovations that we investigate are themselves 'systemic' in the sense that they are potential vessels for system innovation in the domain of age-friendly housing; when upscaled they have the potential to fundamentally alter the current way in housing for an ageing population is being provided. However, the analysis in this report goes beyond a mere innovation system analysis as expressed in the literature on Technological Innovation Systems analysis (e.g., Hekkert et al. 2007; Bergek et al. 2008). The TIS approach would have offered very concrete handles and a neatly prescribed approach for



investigation. However, once we started our analysis, it turned out not to be fully suitable for our purposes for two reasons.

First, the innovations that we observe on the ground are not only technological in character. Besides the introduction of new smart building technologies and the integration of networked devices into home environments, there are a range of promising social and conceptual innovations being introduced to enable and reshape ageing in place. These include novel ideas and new approaches to living together – such as home-sharing, intergenerational homes and other forms of co-housing that bridge the divide between ageing in place individually and a nursing home – these conceptual novelties should certainly be taken into account in any serious innovation analysis.

Second, the domain of 'age-friendly housing' is not a technological field or even a coherent sector as such. The innovation space around age-friendly housing is more fluid and a wide variety of stakeholders with very different ideas and backgrounds are active here. These include architects, developers, construction companies, technology companies, care providers, social housing organisations, government actors, informal carers, older residents themselves and many others. Cooperation between unlikely partners across the silos of housing, care and ICT will be crucial for the success of promising age-friendly housing innovations.

The main objective of this report is to take stock and analyse the age-friendly housing innovations expressed in pilot projects that (1) embody technical, social and conceptual novelties that provide new directions formulated as a distinct set of innovation pathways, and (2) are promising in the sense that they can be scaled up by fostering cooperation, shared envisioning and mutual learning between the wide range of stakeholders brought together through these innovative activities in the domain of 'age-friendly housing'. This diversity of innovation pathways and reflections and how each of these might be supported, raises valuable implications for the further development and testing of the Homes4Life certification scheme, especially with regard to the flexibility that has to be incorporated into the H4L scheme to deal with variety within and between different EU Member States.

Because it was not feasible to focus our attention on *all* EU Member states, a decision was made to zoom in on four countries from different parts of Europe (that represent different care regimes and ways of providing housing): Poland, France, Ireland and the Netherlands. This was done in order to ensure enough depth for the analysis whilst also taking diversity amongst national contexts into account.

### 1.3 Relations to other activities in the project

The work developed in this deliverable is part of Work Package 2 of the Homes4Life project. As such, it aims to provide insights into the context into which the H4L scheme should be made to work.

The activities in Task 2.1 provided the necessary information on the structural factors relevant for age-friendly housing (demographic trends, care provision, structure of the housing stock, etc.) for different European countries (for more information see the country reports being developed in conjunction with WP2.1). Especially the overviews on Poland, France, the Netherlands and Ireland proved a very good starting point for the innovation analysis in these countries.

Furthermore, the array of innovative activities on the ground that are mapped in Task 2.5 provided a good insight in the kinds of home environments that the certification scheme could encounter when made operational. It also allowed the identification of potential pilot sites to test the first version of the Homes4Life certification scheme, which is the main goal of Task 4.3. A selection of experiments and the involved stakeholders that were previously contacted for Task 2.5, can be contacted again for Task 4.3.

## 1.4 Report structure

The report is structured as follows:

Section 2 provides the conceptual starting point. It legitimates the focus and provides the intellectual background for the thinking behind core concepts such as home, experimentation, upscaling and socio-technical regimes.

Section 3 provides the three-step methodological approach to data collection and analysis.

Section 4 presents the main empirical findings with regard to experimenting for age-friendly housing in different European countries. A general overview is provided and the specific situation of experimental activity on the ground in four countries (Poland, France, Ireland and the Netherlands) is detailed.

Section 5 presents an overview of the main patterns encountered during the fieldwork and, in an effort to synthesize, it articulates a set of 'innovation pathways' (possible futures or potential ways forward as articulated stakeholders in the various countries and expressed through the experimental activities encountered on the ground). These pathways provide a starting point to discuss the different dimensions of the 'readiness levels' and a reflection on the implications for certification.

## 1.5 Contribution of partners

For this deliverable the main contributor has been Utrecht University. Other H4L partners, particularly those involved in WP2, have also contributed:

- UU: Responsible for empirical research and main author
- AGE: inspiration French and Belgium experiments, sharing contact details and review of the Innovation Analysis report



- R2M: suggestions French experiments, sharing contact details and review of the Innovation Analysis report
- UPM: suggestions Italian experiments and review of the Innovation Analysis report
- TNO: Inspiration Dutch pilot projects and sharing contact details
- TEC: suggestions Spanish experiments and review of the Innovation Analysis report
- ECTP: review of the Innovation Analysis report
- Eurocarers: review of the Innovation Analysis report
- Certivea: review of the Innovation Analysis report

## 2 Conceptual background: on innovation and homes

### 2.1 Home as a starting point

In this report we focus our attention on innovative activities associated with age-friendly 'homes'. The first thing that should be noted is that a 'home' is more than a house, apartment or any other physical shell that harbours a domestic living environment.

Philosophers, geographers and architects have a long tradition of engaging with the broad concept of home (e.g. Heidegger 1971; Tuan 2004; Vischer 1991 - for a broad overview see Blunt 2005 or Dekkers 2011). The notion of home is open to interpretation, sometimes used in a metaphorical way. It is closely related to concepts such as house and dwelling, but it carries with it a set of social and emotional attachments. Home is a "material and an affective space, shaped by everyday practices, lived experiences, social relations, memories and emotions" (Blunt 2005: 506) and it is inextricably linked to ideas about "identity, family, nation, a sense of place, and to a sense of responsibility towards who shares this place" (Duncan and Lambert, 2003); and it is a place that offers "security, familiarity and nurture" (Tuan, 2004:164).

In practical terms for our analysis of innovative activities in the home, this means two things. First, it allows us to focus social and emotional aspects of a home. These emotional and social elements, along with physical elements, together are essential components of what it means to live independently maintaining a good quality life at home. Second, it allows us to look beyond the physical walls of the apartment or house by also **including the immediate indoor and outdoor surroundings**. Whilst these are not inside the house, they can be included in the wider notion of home. This allows for a focus on a broader set of innovations, **including not only physical novelties but also social and conceptual novelties** – i.e. innovations that do not feature new technology, but that feature new ways of organizing social processes or new conceptual housing categories that fill the void between traditional nursing homes and a conventional single household apartment.

### 2.2 Home as an innovation junction

Various kinds of organizationally and geographically distinct spaces can be seen as important sites for the concentration and development of particular innovations. These innovative spaces have led to the emergence of new infrastructures, products, activities, services, and industries as well as new sets of user patterns and identities. These spaces include cities, ports, factories, hospitals, offices, but also households or homes.

From our perspective, the home is best described as an 'innovation junction', which can be defined as "a space in which different sets of heterogeneous technologies are mobilized in support of social and economic activities and in which, as a result of their co-location, interactions and exchanges among these technologies occur" (De Wit et al.

2002: 51). In this context 'heterogeneous technologies' refers to a broader conceptualization of technology beyond technical elements and material artefacts; instead it points to the entire network of technical and social relations (Law 1987) and **different kinds of innovations**, such as social innovations and new ways of doing and organizing – are seen as part of a wider socio-technical system (Hughes 1987).

An important element of an innovation junction is the co-location of innovation, which encourages certain groups of stakeholders to develop mechanisms and arrangements to coordinate the interaction of these innovations, sometimes through the development of so-called mediating technologies that facilitate and stimulate the interaction between various artefacts and innovative practices.

For our purposes, this means that since **many different kinds of stakeholders** are introducing technical and social innovations into the homes of older adults. The **interactions between innovations and the coordination attempts between diverse stakeholders** are crucial to understand how the **material composition, social organisation and associated identities of what is considered an 'age-friendly home'** are taking shape.

## 2.3 Home as a site for experimentation

Promising innovations of different sorts are introduced into society through concrete pilot projects (Kemp et al. 1998). Therefore, homes are not only spaces of innovation but also sites of technical and social experimentation. These **concrete socio-technical experiments are the main unit of analysis for this report**.

Socio-technical experiments are early expressions of promising new ideas that harbour the seeds of novelty that can contribute to wider changes in the way we currently organize the provision of housing, healthcare and ICT. More analytically precise, socio-technical experiments can be defined as "inclusive, practice-based and challenge-led initiatives designed to promote system innovation through social learning under conditions of uncertainty and ambiguity" (Sengers et al. 2016:153).

For our purposes, this implies that the initiatives we study are '**bounded' in space and time** (the home as a temporary site of experimental activity would qualify) and inclusive in the sense that they are a **collective endeavour carried out by a coalition of diverse actors** (also see: Vergragt and Brown 2007). The initiatives that are practice-based, or 'hands-on' attempts with innovation being used in a **real-world setting** instead of a laboratory (though sometimes the distinction is not so clear, as in the multitude of 'living laboratories' that are now appearing throughout Europe, such as ENoLL, the European Network of Living Labs and FISSAC, a European project on Fostering Industrial Symbiosis for a Sustainable Resource Intensive Industry across the extended Construction Value Chain).

The challenge-led character implies that we analyse initiatives that **respond to societal challenges related to housing for older adults**. The initiatives should be seen in the context of system innovation, thus recognizing the material, institutional and cognitive obduracy of the status quo and **geared to change key elements of the current way housing, care**

**and/or ICT systems are organized.** The idea of an initiative promoting social learning refers to the way in which **stakeholders learn in practice** through observation and imitation (important if the experiment is to be followed up) and that they learn in a broad sense; an experiment should allow stakeholders to learn not only about the performance of the innovation itself, but also to **learn about the wider societal implications of the innovation.** The conditions of uncertainty and ambiguity in the definition refer to a final feature of these initiatives, namely that it is unclear to what extent the initiative will attract a wider following in the future (uncertainty) and it is an open question what the desirable and undesirable longer term effects of the intervention will be (ambiguity).

For experiments to have an effect on the wider world, it is often stated that they need to be 'scaled up'. Because **upscaling** is a term that is analytically imprecise and open to many different meanings, we put forward four distinct mechanisms to articulate how experiments can come to have impact or wider outcomes (also see Turnheim et al. 2018). These are:

- **Replication** (an experiment is copied by stakeholders at another site),
- **Expansion** (the experiment grows from within the same site in area covered, number of people reached or to new application domains),
- **Institutionalization** (features of the experiment become mainstream practice or anchored in laws or other formal institutions)
- **Circulation** (the ideas central to the experiment move to other places because stakeholders travel to and from the experiment and knowledge about the experiment circulates through various media).

Through these mechanisms, knowledge, capabilities and networks developed by experiments become mobile and generic and eventually embedded in reconfigured systems of housing, care and/or ICT.

How these systems become reconfigured is an open question. Experiments and the innovations that they harbour embody a specific vision for the future. In other words, experiments point to certain directions for development and **contribute to distinct innovation pathways.** For our purposes, it is clear smart devices represent a different innovation pathway than a new kind of inter-generational co-housing model. But it is **an open question which sets of innovations are often brought together** in actual experiments and whether they are considered by the stakeholder involved as a **compatible match or diverging directions** to move forward with age-friendly housing.

## 2.4 Home as a patchwork of regimes

To achieve wider outcomes, experiments should contribute to a reconfiguration of dominant structures (routines, rules and logics) that underpin incumbent systems. These structures are referred to as 'socio-technical regimes', and they provide stability to incumbent systems whilst experiments are geared to challenge those systems (see Kemp et al 1998; Geels 2002). For the domain of age-friendly housing, it is not clear in advance



how we should conceptualize this underlying regime. One way to do this would be to argue that the home is not only a junction for multiple innovations manifested in experiments but also a patchwork of multiple regimes that meet and overlap.

For our purposes, we make a distinction between three kinds of socio-technical regimes: **regimes of housing, healthcare and ICT**. This means that different stakeholders arrive at the experimental home site with a particular logic and set of routines in mind. For instance, construction companies, developers, and social housing agencies might **see the home primarily as a physical dwelling**. What they see as a promising solution and possible course for action is mainly informed by the standards, routines and cognitive frames that they have internalized. In another vein, healthcare professionals and manufacturers of medical devices might see the **home as primarily a place where care should be provided**. This can lead to very different requirements from the home space that other stakeholders might consider overly 'medicalized' (too much resemblance to a hospital setting) for everyday domestic life. Others still, such as technology companies and start-ups might view the **home as primarily a recipient site** or **home as primarily a market opportunity for smart networked technologies**. There are many potential instances of innovation through experiments that highlight the way these regimes overlap. For instance, an experiment that features a new kind of telecare might feature care professionals who primarily follow rules and routines rooted in medical profession whilst at the same time featuring technology companies who primarily follow rules and routines rooted from their professional world. This can cause tensions between different stakeholders, but it can also provide opportunities to navigate to yet uncharted new directions.

## 3 Methods: a three-step approach

### 3.1 Introduction

The methodological approach used for our analysis can be broken down into three separate steps. An overview is provided in figure 1 below.

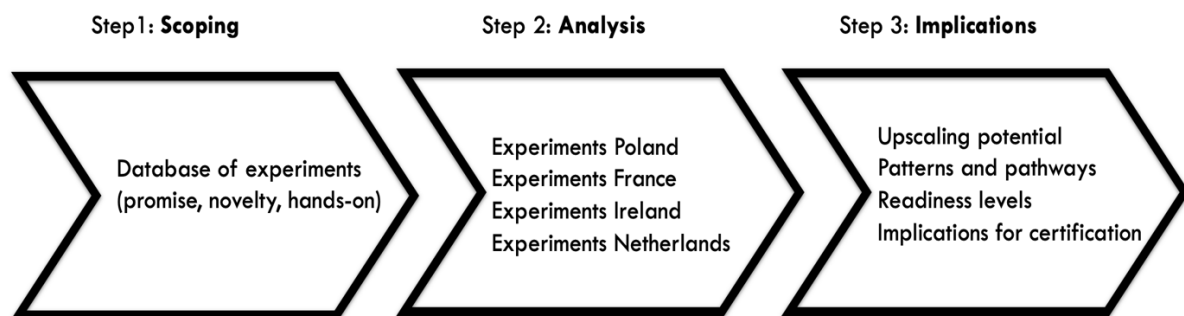


FIGURE 1: METHODOLOGICAL STEPS

### 3.2 Step 1: Scoping

The aim of this step is to produce a **database** that provides a **non-exhaustive overview of innovative age-friendly home experiments in Europe**. To collect information about interesting and innovative initiatives that pilot test various kinds of innovations related to age-friendly housing. As argued in section 2, we call these initiatives 'experiments' and we have included not only the experiments that feature technological innovations, but also experiments that feature other kinds of social and conceptual innovations. The experiments that we consider have to relate to age-friendly homes and this often means that they bring together elements from multiple 'regimes' that structure the systems of physical housing, healthcare and ICT solutions.

Various sources are used to collect experiments. First, existing repositories that feature good practices throughout Europe were consulted. These include repositories that are global, European, national or regional in scope:

- The Global Database of Age-friendly Practices by the World Health Organisation (WHO) Global Network of Age Friendly Cities and Communities (<https://extranet.who.int/agefriendlyworld/afp/>). This contained 55 practices worldwide in the category housing, many of which in Europe.
- The repository by the European Innovation Partnership on Active and Healthy Ageing – EIP AHA (<https://ec.europa.eu/eip/ageing/repository>). This contained 26 practices when searched for the term 'home'.
- The EIP AHA reference sites (<https://ec.europa.eu/eip/ageing/repository>). This contained 74 European regions as reference sites, but this is more about regional innovation ecosystems rather than best practices.



- The AFE-Innovnet repository (<http://www.afeinnovnet.eu/repository/>). This contained 55 initiatives within EU countries, with 12 focusing on housing.
- The repository by the European Covenant on Demographic Change (<https://www.agefriendlyeurope.org/repository>). This showcases many initiatives within EU countries, including on housing.
- The examples of good practices by the PROGRESSIVE project (<https://progressivestandards.org/examples-of-good-practices/>). This contained 4 interesting age-friendly housing/environment initiatives across Europe.
- The catalogue of age-friendly practices by Ireland's Age Friendly Cities and Counties Programme (<http://agefriendlyireland.ie/wp-content/uploads/2016/07/WHO-compendium-4.pdf>). This includes 31 projects and organisations in the domain of 'housing' in Ireland, as well as other projects and organisations in the domains of 'community support and health services' and 'communication and information'.
- The report on Housing Options for Our Ageing Population by the Government of Ireland (<https://assets.gov.ie/9398/ca553fa753b64f14b20e4a8dcf9a46ab.pdf>). This includes 12 comprehensive good practices on housing in Ireland.
- The overview and map of smart homes for the future by Aedes-Actiz (<https://www.kcwz.nl/thema/woonzorgtechnologie/slim-wonen-in-de-toekomst-voorbeeldwoningen-op-de-kaart>). Provides an overview of 23 smart homes with a care component within the Netherlands.

Second, when looking for information about the experiments within these digital repositories, more weblinks could be found to other potentially interesting experiments, which were then further explored online.

Third, through the networks of members of the Homes4Life consortium, experts from different European countries were approached who were in a good overview position to provide additional suggestions for interesting experiments within their respective countries (this was done for Poland, the Netherlands, Belgium, France, Italy and Ireland).

When approaching these experts, a clear idea was formulated in terms of the requirements for an experiment to be added to our database. Specifically, an experiment should feature concrete interventions in a specified living environment/home that embody an approach that is promising for the future and to an extent innovative (i.e. they should contain an element of novelty, this can be a technological novelty in terms of ICT devices or a conceptual/social novelty in terms of implementing ideas that challenge vested ideas of what it means to grow older or things like new modes of living together such as new communal housing formulas with pooled care). More specifically, three criteria are considered.

- **Hands-on:** the experiment should be a concrete intervention in an actual home.
- **Promising:** the experiment is viewed serve as a good practice or source of hope on how to move forward with the development age-friendly homes.
- **Novelty:** the experiment is a vessel for something new, this can be technological innovation with smart ICT devices or social innovation with alternatives that challenge current ideas of what it means to grow older – this can include new modes of living together such as communal housing formulas with pooled care.

### 3.3 Step 2: Analysis

In order to provide an in-depth analysis, the choice was made to **zoom in on four countries from different parts of Europe: Poland, France, Ireland and the Netherlands**. The choice was made to focus on those four so that the analysis could compare the situation in different parts of Europe where traditions in their approach to ageing, family structures, care provision as well as the role of the State vary. (also see the country reports devised in conjunction with WP 2.1)

- **The Netherlands** (along with Germany) has been categorized as a part of a 'central European subsidiary model' of social care provision in case of old age (Anttonen and Sipilä 1996). In this model the primary responsibility for the care of older adults lies in principle with the family, but in the Netherlands the state is also considered to be the steward for the older people (Bettio and Plantega 2004).
- **France**, in particular the regions in Southern France as our starting point for the analysis, is the country we have chosen as part of the pool of countries from southern Europe that are categorized in terms of a 'southern European care model' (Anttonen and Sipilä 1996) with an emphasis on family care.
- **Ireland** could be categorized (along with the UK) as part of a more 'Anglo-Saxon' oriented model of care, where the role of the state is smaller and more of an emphasis on means-tested service entitlements (Anttonen and Sipilä 1996).
- **Poland** was the focus chosen to include the (Central) Eastern part of Europe for the analysis (no predefined care model as such have been identified for this region). Poland emerged from behind the iron curtain with different set of institutions related to ageing, care and housing as compared to countries in western and southern parts of Europe and far less research has been conducted previously.

In each of these four countries several **experiments were selected for further in-depth analysis** through purposive sampling: The choice for these particular experiments was made because they were considered pioneering and relevant by key stakeholders or experts in these countries and because they represent different directions for the future of age-friendly homes.

In each country, documents were collected and experts were approached during **four one-week fieldwork visits**. During these visits key stakeholders involved in these experiments were interviewed and site visits were conducted. In total, **7 site tours** were conducted, which included a guided walk by one of the stakeholders involved in the experiment there. Moreover, a total of **34 in-depth interviews** lasting between 1 and 2,5 hours were conducted, sometimes these included a presentation of the designs of the home that featured in the experiment. The questions in these interviews related to the **set-up of the experiment itself** (the origin story, vision behind it, stakeholders involved, what was learned, links to other innovations), to the **upscaling potential** (the more specific mechanisms of replication, expansion, institutionalization and circulation, the policy and entrepreneurial support structures, tensions between different regimes/domains, and reflections on the added value of certification) – see Annex 1 for the interview protocol.



### 3.4 Step 3: Implications

After the creation of the database and the data collection for the four countries, the final step was to analyse and compare to **distil patterns and pathways**. Patterns refer to recurring ideas about certain innovations and widely shared reflections that can be found in the stakeholders' testimonies. And pathways refer to distinct innovation categories into which most of the experiments in each of the four countries can be said to fit. Each category embodies a different promising direction for future development of age-friendly homes in Europe.

The distinct patterns and pathways found within Poland, France, Ireland and the Netherlands provide a way to compare age-friendly housing activities in different European countries. This does not result in a single score to assess each country in terms of their readiness level, but rather a **qualitative and multi-dimensional assessment for activities in different European settings**.






If the Homes4Life certification scheme is to become a catalyst for each of these pathways identified within the four countries – in other words, **a tool to facilitate the upscaling of age-friendly homes throughout Europe** – then the stakeholder testimonies collected can provide valuable insights on this as well.


## 4 Findings: experimenting with age-friendly housing across Europe

### 4.1 Database

A clear outcome of the stocktaking exercise elaborated on in methodological step 1 (described in previous chapter), is a database that contains a collection of relevant experiments related to age-friendly homes. Through the fieldwork visits and interviews described in methodological step 2, more experiments from Ireland, Poland, France and the Netherlands were identified. The summarizing table below provides a non-exhaustive overview of innovative activities related to age-friendly homes that have been initiated throughout Europe.

TABLE 1 – OVERVIEW OF EXPERIMENTS RELATED TO AGE-FRIENDLY HOMES THROUGHOUT EUROPE

Name of experiment	Location	More information
Lugaritz Homes	San Sebastian (Spain) 	A housing complex geared to improve neighbourhood connectivity and to create new methods of social cohesion for a more age-friendly experience. See <a href="https://extranet.who.int/agefriendlyworld/afp/">https://extranet.who.int/agefriendlyworld/afp/</a>
La Vida Eco Village	L'Ametlla de Mar (Spain) 	An eco-village that offers a new model for retirement in Spain. At the heart of the concept is the promotion of vibrant and independent lifestyles amongst the 50-plus community, along with the provision of a healthy living environment. See <a href="https://www.agefriendlyeurope.org/node/618">https://www.agefriendlyeurope.org/node/618</a>
SHLL CIAmI	Madrid (Spain) 	The Smart House Living Lab (SHLL CIAmI) features a test apartment Smart House Living Lab. It focuses on modern control technology, monitoring and regulation of the environment and cutting-edge services are tested for AAL, e-inclusion and e-health. See <a href="https://www.agefriendlyeurope.org/node/683">https://www.agefriendlyeurope.org/node/683</a>
TRABENSOL	Torremocha de Jarama (Spain) 	Trabensol is a pioneer senior cohousing initiative in Spain, which was started in order to realize a new form of collaborative housing aimed at older people. The values they want to put in put forward are: friendly people who have made solidarity, cooperation, mutual help and the spirit of welcome the core values in their coexistence. See <a href="https://trabensol.org/">https://trabensol.org/</a>
VWiQ	Hamburg (Germany) 	Vernetztes Wohnen im Quartier (VWiQ) was a pilot apartment building integrated with smart home technology, ambient assisted living support systems, and neighbourhood services. It featured home automation, electronic controls for household appliances, door, windows etc as well as fall detection, social alarms, motion/activity sensors, an automatic bar-code ordering system, and a smart laundry service.

		See <a href="http://www.vernetztes-wohnen-hh.de">http://www.vernetztes-wohnen-hh.de</a>
WoQuaZ	Weiterstadt (Germany) 	WoQuaZ or 'Wohn- und Quartierzentrum Claus Albrecht Haus' is an innovative age-friendly housing form. See <a href="https://www.woquaz.com/über-uns/">https://www.woquaz.com/über-uns/</a>
Welhavens street 5	Oslo (Norway) 	Frame as a 'technological apartment building' this municipal building with 10 apartments has been renovated and tailor-made to fit the needs of older people experiencing cognitive decline. These technologies include sensors, anonymous cameras, GPS watches, automatic medicine dispensers and automatic voice instructions and the goal is to live longer at home. See <a href="https://extranet.who.int/agefriendlyworld/afp/welhavens-street-5-technological-apartment-building/">https://extranet.who.int/agefriendlyworld/afp/welhavens-street-5-technological-apartment-building/</a>
Maison Biloba	Brussels (Belgium) 	15 low-energy units of senior housing, a community room and a day care centre, located on the ground floor of the building which also features arranged around a small internal courtyard with a symbolic tree and is open to the whole neighbourhood. See <a href="http://www.housingeurope.eu/blog-661/the-highly-symbolic-pilot-project-house-biloba">http://www.housingeurope.eu/blog-661/the-highly-symbolic-pilot-project-house-biloba</a>
Senioren Thuis Borgerhout	Antwerp (Belgium) 	1 building with 5 apartments that offers an alternative form of living for people aged 65 and over, where about 5 senior citizens share a social home. Residents of different social and cultural backgrounds each have their own apartment and make their own choices, but they do live together under one roof and can help each other out. Additionally, the residents can make use of a wide network of partners who are responsible for family care, home nursing, cleaning help, DIY service, etc. See <a href="http://www.seniorenthuis.net/wp-content/uploads/2016/12/Senioren_Thuis_draaiboek_def.pdf">http://www.seniorenthuis.net/wp-content/uploads/2016/12/Senioren_Thuis_draaiboek_def.pdf</a>
Abbyfieldhuis /groepwonen voor senioren	Ghent (and many other places in Belgium) 	A concept for 55+ people inspired by the idea "a good neighbour is worth more than a distant friend". Living together independently creates a new balance between independent private life, living with others nearby See <a href="https://www.abbeyfieldvlaanderen.be/nl/over-abbeyfield/">https://www.abbeyfieldvlaanderen.be/nl/over-abbeyfield/</a> <a href="https://www.ocmwgent.be/Groepswonen-senioren.html">https://www.ocmwgent.be/Groepswonen-senioren.html</a>
Samenhuizen	Brussels (Belgium) 	An apartment building for seniors living together in a group home. It features housing and care. In addition to a few young people and seniors, there are also adults with a memory disorder, an intellectual disability or a psychiatric problem. See <a href="http://www.kenniscentrumwwz.be/node/540">http://www.kenniscentrumwwz.be/node/540</a>
Casa Viva	Brussels (Belgium) 	An Apartment building for seniors living together in a group home. It is a solidarity-based housing project for vulnerable older people and young families with and without a migrant background. The project includes communal facilities. See <a href="http://www.kenniscentrumwwz.be/cahier-casa-viva">http://www.kenniscentrumwwz.be/cahier-casa-viva</a>
Senioren onder de Toren	Maldegem (Belgium) 	2 refurbished buildings so that vulnerable older adults can be received and housed in their own village circle. In Kleit and in Adegem, the vacant presbyteries were converted into










		contemporary homes with senior apartments. These care satellites are managed from the residential care hub in the centre of Maldegem. See <a href="https://www.ocmwmaldegem.be/senioren-onder-de-toren">https://www.ocmwmaldegem.be/senioren-onder-de-toren</a>
Botermarktpoort	Ghent (Belgium) 	Apartment building with social assistance housing with 19 apartments, all wheelchair and lift accessible. See <a href="https://www.ocmwgent.be/Botermarktpoort.html">https://www.ocmwgent.be/Botermarktpoort.html</a>
Health@Home	Oderzo - Veneto Region (Italy) 	Information kindly provide by Sara Casaccia: "H@H aims to provide the integration of ICTs technologies, in residential homes of older users, to identify and implement services to better help and support people in improving their independence. 2 buildings with 8 apartments and 13 older users have been monitored for 1 year using physiological sensors and domotic sensors installed in the home environment. The profile of the users/families have been monitored to define new services for the users and improve the wellbeing of the users". See <a href="https://www.mdpi.com/1424-8220/18/7/2310">https://www.mdpi.com/1424-8220/18/7/2310</a>
eWare	Italy (also, in the Netherlands, Switzerland and Norway) 	Information kindly provide by Sara Casaccia: "The eWARE eco-system will support and enhance the quality of life of informal caregivers and people with dementia, and more quality of professional care with lifestyle monitoring and social support robotics, providing effective responses to many key aspects in the management of these patients" See <a href="http://www.qal-eware.eu">www.qal-eware.eu</a>
Knarrenhof (Aahof)	Zwolle (Netherlands) 	Knarrenhof is an innovative form of housing that actively involves new resident in home making and community support. It is directed at 'young older adults' and 'old older adults' who want to help each other out and to live independently as long as possible. The attitude and affinity with the neighbours are considered very important and notions of good neighborhood are central. For more information see the overview section on the Netherlands in this report
Hogeweyk	Weesp (Netherlands) 	The Hogeweyk a pioneering care facility / community for older adults with dementia. Compared to traditional nursing homes the residents with dementia are more active and live a more 'normal' life. The 'residents, NOT patients' live in one of several housing types that fit their lifestyle. <i>For more information see the overview section on the Netherlands in this report.</i>
Empatisch Wonen	Roermond (Netherlands) 	59 social housing apartments in a former care home give substance to the vision of 'empathic living' (Empathisch Wonen). The main idea behind empathic living is that a building can be easily transformed to adapt to changing needs of resident groups <i>For more information see the overview section on the Netherlands in this report.</i>
Humanitas woonstudenten	Deventer (Netherlands) 	An innovative intergenerational housing arrangement in the Netherlands as an example of how a local long-term older people care practice evolved in response to a national agenda to close down nursing homes in the Netherlands. <i>For more information see the overview section on the Netherlands in this report.</i>

Selficient Huis	<p>Utrecht (Netherlands)</p> 	<p>A self-sufficient modular age-friendly house. Selficient is the name for a housing concept created by a new start-up and they have a demonstration house in Utrecht, which is portrayed as 'the house of the future'. The idea of the Selficient company is to change traditional building practices.</p> <p><i>For more information see the overview section on the Netherlands in this report.</i></p>
Woonservicezone	<p>Haarlemmermeer (Netherlands)</p> 	<p>An innovative home care concept and funding model. A Cristian healthcare foundation and a consultancy and construction management company are developing an affordable 'home service zone' (woonservicezone) for various groups in Haarlemmermeer. Such a home service zone is a residential area for 5000 to 20.000 people with many care service facilities and adapted homes.</p> <p><i>For more information see the overview section on the Netherlands in this report.</i></p>
Het Ouden Huis	<p>Bodegraven (Netherlands)</p> 	<p>These 22 apartments provide an alternative for a care home targeted at older adults with or without special care needs need. According to the founders "the (traditional) care home strips away your strength and sense of dignity". the Oudenhuis concept relies on principles related to independence, co-living, affordability and control.</p> <p><i>For more information see the overview section on the Netherlands in this report.</i></p>
Tuindorp Oost	<p>Utrecht (Netherlands)</p> 	<p>Since 2016 youths lived alongside older adults in this innovative care home. A stop was introduced which resulted in too many vacant rooms and younger adults looking for housing were allowed to move in. In 2018 it was announced that both younger and older adults had to vacate the place by the end of that year, which resulted in controversy and engagement.</p> <p><i>For more information see the overview section on the Netherlands in this report.</i></p>
Benring	<p>Voorst (Netherlands)</p> 	<p>A residential complex with 72 apartments. It was the site of an innovative transformation project which shows how social and technological innovations can be integrated through retrofitting existing real estate for older adults.</p> <p><i>For more information see the overview section on the Netherlands in this report.</i></p>
Zorg Innovatie Huis	<p>Baarn (Netherlands)</p> 	<p>A life course resilient house where older adults, informal carers, healthcare professionals, product and service providers and education stakeholders strive for innovative personalized care. The house provides an inspiring location that collects innovation and new technology for home care and makes it tangible. These smart solutions are tested and learned from in a real-world setting.</p> <p><i>For more information see the overview section on the Netherlands in this report.</i></p>
Het Zorg(T)huis	<p>Winschoten (Netherlands)</p> 	<p>Project about showcasing technology and giving information, it integrates ideas on smart homes and on care</p> <p><i>For more information see the overview section on the Netherlands in this report.</i></p>
Belevingswoning Schoneveld	<p>Doetinchem (Netherlands)</p>	<p>An 'experience' apartment showcasing how older adults can live longer at home.</p>



		<i>For more information see the overview section on the Netherlands in this report.</i>
Huis van Zelfredzaamheid	Enschede (Netherlands) 	Project showcasing technologies and providing information, it integrates ideas on smart homes and on care. <i>For more information see the overview section on the Netherlands in this report.</i>
Het slimste huis	Alkmaar (Netherlands) 	Project showcasing technologies and providing information, it integrates ideas on smart homes and on care. <i>For more information see the overview section on the Netherlands in this report.</i>
Pilots logeertzorg	Zeist (Netherlands) 	The 'pilots sleep-over care' are a way to temporarily lift the burden from the shoulder of informal carers. For 10 pilot municipalities the option is given for older adults with high care needs or dementia to temporarily move to a care institution to 'give some breathing room' to informal carers. <i>For more information see the overview section on the Netherlands in this report.</i>
Mimo Wieku apartment	Warsaw (Poland) 	The U Siebie Mimo Wieku ('at home despite the age') showroom apartment presents a comprehensive set of solutions how to enable older adults to have an active and independent life in their own home. <i>For more information see the overview section on Poland in this report.</i>
Stalowa 29	Warsaw (Poland) 	This intergenerational apartment building is one of the first cohousing solutions in Poland to be inhabited by people from various age groups. It is a retrofit of an older building (renovation is ongoing) and the idea is that serve as a model for a modern, sustainable and well-designed housing modernisation. <i>For more information see the overview section on Poland in this report.</i>
Wólczajska 168	Lodz (Poland) 	This integrational house was partly inspired by the Warsaw Stalowa 29 exemplar but is now actually at a further stage. This project is about converting a 1883 villa to fit with senior apartments. <i>For more information see the overview section on Poland in this report.</i>
Inter-generational tenement house Szczecin	Szczecin (Poland) 	A multi-generational house actually in operation. It seems to be project with senior apartment linked to an orphanage to foster the multi-generation exchange of support (though not much information could be found about this). <i>For more information see the overview section on Poland in this report.</i>
Sheltered housing tenants are waiting for	Ostrów Wielkopolski (Poland) 	14 sheltered apartments were created as part of a larger program in response to the needs of a growing number of seniors and the lack of flats currently dedicated to people aged 60+ in Ostrów Wielkopolski. <i>For more information see the overview section on Poland in this report.</i>
Orpea Polska Mieszkania dla seniorów	Wroclaw (Poland) 	Housing investment dedicated to older people and independent apartments dedicated to older people with or without assistant needs. <i>For more information see the overview section on Poland in this report.</i>






Orpea stoya rest home	Warsaw area (Poland) 	Like the Orpea Polska Mieszkania dla seniorów example above, also a type of nursing home alternative by Orpea. <i>For more information see the overview section on Poland in this report.</i>
Dom dla seniora Szczecin	Szczecin (Poland) 	Dom dla seniora ('Senior Citizen's Home') features 15 well-designed apartments (12 one-room units and 3 two-room units). They are located in a building located in the city centre of Szczecin, which is equipped with an elevator and designed with older adults in mind, i.e. without architectural barriers. <i>For more information see the overview section on Poland in this report.</i>
Assisted living flats Szczecin	Szczecin (Poland) 	38 assisted living flats for older adults funded local government. <i>For more information see the overview section on Poland in this report.</i>
Assisted living in Stargard	Stargard Szczeciński (Poland) 	Social housing for older adults with the help of ICT systems and volunteers, the first of this type in Poland. Further search of a WHO database suggests that there are 24 apartments and that this is part of the 'house needed' program and the 'not alone' program. <i>For more information see the overview section on Poland in this report.</i>
Mieszkania dla seniorow	Poznan (Poland) 	141 apartments designed exclusively for seniors are located in three buildings. These apartments are intended for older people who have applied for housing in the past but have not received them due to the lack of such a possibility. <i>For more information see the overview section on Poland in this report.</i>
Dom Seniora Opole	Opole (Poland) 	102 rental apartments for rent in the TBS Senior system, with 3 buildings of 34 apartments in each. In each building there is a room for shared use by residents (a common room) and facilities for those with mobility impairments. <i>For more information see the overview section on Poland in this report.</i>
Osiedle senioralne	Warsaw (Poland) 	Presented as the First Senior Housing Estate in Poland, which provides an alternative to a nursing home. It is suggested that people feel guilty when they put their parents in a nursing home, but that they should not feel guilty if their parents move to this type of living arrangement. <i>For more information see the overview section on Poland in this report.</i>
Angel Care centrum seniora	Wroclaw (Poland) 	Angel Care is a nursing home with high-quality nursing support and high-level facilities. This 'best nursing home' consist of 48 fully furnished and safe apartments designed for one or two people. <i>For more information see the overview section on Poland in this report.</i>
Senioral Apart Hotel Zarabia	Bielsko-Biała (Poland) 	Apartments for older adults on with proximity of mountains and rivers or ski resorts. Their unique selling point is the excellent geographical location. <i>For more information see the overview section on Poland in this report.</i>

27 Delvalle	Nice (France) 	A centre on connected health and healthy ageing, which includes a model apartment that is designed as a showcase and a testing platform for technologies supporting independent living and autonomy. <i>For more information see the overview section on France in this report.</i>
Maison Babayagas	Paris (France) 	A feminist cohabitation project in Paris. A group of dynamic women have devised a new kind of communal living for older adults based on shared values of feminism. Taking control of their retirement, they live together in a self-managed social housing project. <i>For more information see the overview section on France in this report.</i>
Vivre aux Vignes	Grenoble (France) 	A communal living facility that amounts to a novel housing formula with pooled services and care. It is conceptually in between an individual a home and a nursing home and also aimed at older adults with a modest budget. <i>For more information see the overview section on France in this report.</i>
Alzheimer Village Landais	Dax (France) 	An Alzheimer village in the Southwest of France, inspired by the Dutch project the Hogeweyk (see section 4). <i>For more information see the overview section on France in this report.</i>
La Note Bleue	Limonest (France) 	A residence complex to support ageing in place through adapted housing with 23 units of which 17 are equipped to accommodate people with loss of autonomy. <i>For more information see the overview section on France in this report.</i>
Andromede intergeneration district & Modulab	Blagnac (France) 	20 houses and 80 apartments are of part of the Andromède intergenerational district, located in Blagnac. The latter is made up of evolving housing that can be adapted to the various stages of life and especially to the loss of autonomy. On this site is also collective building called the Modu-Lab. <i>For more information see the overview section on France in this report.</i>
Bailleur social	Lille (France) 	Small experiment implementing a modular housing system. <i>For more information see the overview section on France in this report.</i>
Great Northern Haven	Dundalk (Ireland) 	A new housing project with 16 apartments (including one showroom and testing apartment) built to support 'life-time adaptability' and Active Assisted Living for older adults. Each apartment is equipped with sensors and interactive technology to support telecare. <i>For more information see the overview section on Ireland in this report.</i>
AVA pilot project house	Dublin (Ireland) 	AVA housing offers a solution in the domain of 'home sharing', which offers an alternative to older homeowners whereby their homes are adapted to their future needs whilst also creating a rental capacity within their home. This provides financial benefits and a sense of security and community for homeowners. <i>For more information see the overview section on Ireland in this report.</i>

Inchicore Housing with Supports	Dublin (Ireland) 	Planned housing project with 52 apartments to develop a new model of 'housing with supports' for older adults, featuring a physical environment adapted according to universal design principles and appropriate care and supports provided on site, integrated within the local community. <i>For more information see the overview section on Ireland in this report.</i>
Broome Lodge	Dublin (Ireland) 	43 new apartments built according to Universal Design criteria and rented out social housing by an approved housing body. <i>For more information see the overview section on Ireland in this report.</i>
Proudstown	Navan (Ireland) 	4 new apartments built on a previously derelict site. Small-scale development that also features renewable energy innovations. <i>For more information see the overview section on Ireland in this report.</i>
McAuley Place	Naas (Ireland) 	A non-medical, intergenerational and not-for-profit housing association with 53 apartments for social and private housing. <i>For more information see the overview section on Ireland in this report.</i>
Colivet Court	Southill (Ireland) 	35 apartments designed to be a catalyst in both the social and physical regeneration of the area, generating a sense of pride, empowerment, ownership and mutual respect. <i>For more information see the overview section on Ireland in this report.</i>
Leighlinbridge Housing	Leighlinbridge (Ireland) 	15 apartments on the grounds of an old presbytery building, provides for security and passive-surveillance and a sense of community <i>For more information see the overview section on Ireland in this report.</i>
Father Lemass Court	Dublin (Ireland) 	32 apartments with the goal to create a community through the provision of a central courtyard with an adjoining community room and a communal roof garden, all designed so as to provide passive supervision and social contact. <i>For more information see the overview section on Ireland in this report.</i>
SVP Malahide	Dublin (Ireland) 	37 apartments devised over two ranges of housing along opposing sides of the site. This makes the enclosed garden the central focal point, which provides a secure ambience that maximizes passive surveillance and generates an environment of communal engagement. <i>For more information see the overview section on Ireland in this report.</i>
Rochestown House	Dublin (Ireland) 	34 apartments from the 1970s undergoing a deep energy retrofit to counter fuel poverty and geared to maximize the number of units on this site. <i>For more information see the overview section on Ireland in this report.</i>
Glór Na Srútha	Cloncara (Ireland) 	12 apartments in a rural village setting and incorporating Age Friendly Design guidelines and universal design principles. Lifetime adaptability, efficiency of technology,



		and integration with the existing community were all key components. <i>For more information see the overview section on Ireland in this report.</i>
Cuan an Chláir	Ennis (Ireland) 	12 houses and communal facilities. Funding was received from a mix of government funding and other sources based on donations, local fundraising and land allocated by the church. <i>For more information see the overview section on Ireland in this report.</i>
Ballygall	Dublin (Ireland) 	39 apartments from the 1970s, remodelled, refurbished and energy retrofitted and fully accessible. <i>For more information see the overview section on Ireland in this report.</i>
Annamore Court	Dublin (Ireland) 	70 newly built social apartments in an existing derelict 1960s social housing scheme with a higher density development (this way underused larger council owned houses become available for larger families). Additional supports and services are provided on site with the aim of supporting independent living in the community for as long as possible. <i>For more information see the overview section on Ireland in this report.</i>

## 4.2 The Netherlands

### 4.2.1 Background

In the Netherlands there is a relatively well-endowed state support system for social care, with both informal carers and the state bearing the responsibility for older adults in need of long-term care. Whilst informal care can be seen as the basis, there are no legal obligations to provide such care. The Dutch state, on the other hand, has a legal responsibility for citizens in need of care.


In terms of housing, the quality of the housing stock is relatively high and includes many social housing projects (a larger percentage than in surrounding countries). Generally speaking, older adults (79%) want to keep control over their lives most and want to live in their own homes (Doekhie et al. 2014).



For more information see the country reports being developed in conjunction with WP 2.1





### 4.2.2 Overview

A more detailed overview of age-friendly home experiments identified in the Netherlands is presented in the table below.




TABLE 2 – OVERVIEW OF EXPERIMENTS RELATED TO AGE-FRIENDLY HOMES IN THE NETHERLANDS

Name of experiment	Location	Short description	link
Knarrenhof (Aahof)	Zwolle (Netherlands), also plans for many other Dutch cities 	Knarrenhof is an innovative form of housing that actively involves new resident in home making and community support. It is directed at 'young older adults' and 'old older adults' who want to help each other out and to live independently as long as possible. The attitude and affinity with the neighbours are considered very important and notions of good neighbourhoodship are central. Often those who want to reside here are socially engaged and active (doing voluntary work rather than the stereotype of 'bridge clubs and passively sitting at home') and presented as 'social people who can in principle be called upon' by their neighbours. The name 'knarrenhof' consists of two parts. The first part, 'knarren' takes it from characters of a popular Dutch TV show from the 1980's (van Kooten en de Bie's krasse knarren) who are presented as 'hardy old geezers' as a way to stress the agency and vitality of older adults (the logo presents an old man showing off his muscles). The second part 'hof' can be translated as 'courtyard' and refers to the type of picturesque secluded set of houses facing each other as part urban planning layout conducive for community building. Because this urban form of the courtyard stems from	<a href="#">link</a>





		the Middle Ages in Dutch cities and because notions of good neighbourship stem from an earlier age, the ideas are presented as 'sprung from the past ... (but) also a project for the future'.	
Hogeweyk	<p>Weesp (Netherlands)</p> 	<p>The Hogeweyk a pioneering care facility / community for older adults with dementia. Compared to traditional nursing homes the residents with dementia are more active and live a more 'normal' life. Professionally and inhouse trained staff wear regular clothes instead of a uniform and provide the 169 residents the necessary 24-hour support in care, living and wellbeing. The 'residents, NOT patients' live in one of several housing types that fit their lifestyle (traditional, urban, cosmopolitan and formal - it used to include Indonesian, but this will stop soon because the cohort of older adults from the former colony is getting smaller). The houses of each type are equipped with a shared living room and bedrooms for several (6-7) residents and they are located in a gated neighbourhood setting complete with general store, restaurant and theatre (hence the idea of a dementia 'village'). The walls are permeable to an extent and people from society outside are encouraged to come in as a way to eventually create a kind of 'reverse emancipation' so that society at large becomes more dementia friendly (bringing the outside world in vs bringing the inside world out; social inclusion is a major objective). The underlying vision is to get away from the large-scale medicalized institutionalized model of care home to small-scale normalized social relational model of care.</p>	<a href="#">link</a>
Empatisch Wonen	<p>Roermond (Netherlands), also two other sites in Dutch municipalities</p> 	<p>59 social housing apartments in a former care home give substance to the vision of 'empathic living' (Empathisch Wonen). The main idea behind empathic living is that a building can be easily transformed to adapt to changing needs of resident groups (i.e. because it is adaptable it 'lives with' older adults during their life course, but also for next cohorts of residents such younger people or families). The concept is still relatively open, currently being substantiated. The approach features elements of co-creation and is loosely related to work by visionary Dutch architects from the 1970s. On a secondary level, the empathic living concept as used in Roermond implies certain features, such as: soft walls between one-bedroom apartments (modularity to facilitate future reshuffling of rooms); storage space close to the apartment (for a scoot mobile, but generally useful); a common room (to foster community); broad common hallways (for the scoot mobile and to foster community);- lighting solutions for common hallways (daylight to foster experience or solutions with floors that indicate direction)- placemaking (has to do with identity and atmosphere and the experience of living); new temperature management; fibre optic internet cabled through a technical room located on the same places on every floor to enable easy access and future smart</p>	<a href="#">link</a>

		solutions (to make the home 'domotics-ready'); green on balconies (for liveability).	
Humanitas woonstudenten	Deventer (Netherlands) 	<p>An innovative intergenerational housing arrangement in the Netherlands as an example of how a local long-term older people care practice evolved in response to a national agenda to close down nursing homes in the Netherlands. From 2012 to 2020, there will be 6 students ('woonstudenten') living amongst the older residents. For a minimum of 30 hours a month they are tasked to be a 'good neighbour', for instance by service bread at the common restaurant.</p>	<a href="#">link</a>
Selficient Huis	Utrecht (Netherlands) 	<p>A self-sufficient modular age-friendly house. Selficient is the name for a housing concept created by a new start-up and they have a demonstration house in Utrecht, which is portrayed as 'the house of the future'. The idea of the Selficient company is to change traditional building practices. Their concept house can be built in a short time through standardized practice. The house is presented as 'circular' because sustainable materials are used, can be broken down and rebuilt and it generates its own energy. And the house is presented as 'modular' because it can be adjusted to 'live with you' across the life course. Two specific elements are mentioned as a way to give substance to modularity: future-proof (living as long as possible in the house by adjustments into account in the building process) and life course resilience (house 'lives along with you' through the life course since it can be made bigger and smaller with adjustable rooms).</p>	<a href="#">link</a>
Woonservicezone	Haarlemmermeer (Netherlands) 	<p>An innovative home care concept and funding model. A Cristian healthcare foundation and a consultancy and construction management company are developing an affordable 'home service zone' (woonservicezone) for various groups in Haarlemmermeer. Such a home service zone is a residential area for 5000 to 20.000 people with many care service facilities and adapted homes. Housing and spatial planning are presented as the 'glue' that makes sure that affordable home care is possible. Another interesting associated financial innovation is the idea of an Investment Memorandum as a tool to coordinate investments amongst various kinds of care and construction domain stakeholders involved.</p>	<a href="#">link</a>
Het Ouden Huis	Bodegraven (Netherlands), also plans for Woerden and Waddinxveen 	<p>These 22 apartments provide an alternative for a care home targeted at older adults with or without special care needs need. According to the founders "the (traditional) care home strips away your strength and sense of dignity". the Oudenhuis concept relies on a few key principles related to independence (living on yourself and find company when you want this), aspects of co-living (independent living but aspects of co-living - e.g. shared meals - 'so that you know you are not in it alone') affordability (to include less affluent households); inhouse professional care (through carers in the house, including palliative care), couples stick together (sense of control).</p>	<a href="#">link</a>



<p>Tuindorp Oost</p>	<p>Utrecht (Netherlands)</p> 	<p>Since 2016 youth lived alongside older adults in this innovative care home. A stop was introduced which resulted in too many vacant rooms and younger adults looking for housing were allowed to move in. In 2018 it was announced that both younger and older adults had to vacate the place by the end of that year. They were angry about this and did not understand why, especially since this was perceived as a successful experiment. As a result, the younger and older adults banded together to draft a manifesto for better care for older adults. In the manifesto, the younger adults say: "we have a unique perspective on the life of older adults because we have lived amongst them for two years. That is, until (housing organisation) decided to pull us apart too early". The manifesto is called 'give older adults back their voice'.</p>	<p><a href="#">link</a></p>
<p>Benring</p>	<p>Voorst (Netherlands)</p> 	<p>A residential complex with 72 apartments. It was the site of an innovative transformation project which shows how social and technological innovations can be integrated through retrofitting existing real estate for older adults. The built environment is used flexibly, which makes the building "system- and customer preference proof". The Benring traditional care home was marked for demolition in 2013, but 400 members of the local community spoke out against it and challenged the government. After co-creation workshops they took full responsibility for future functionalities of the building and its prospective future residents. This resulted physically in a refurbished complex (new floor plans and refurbished apartments) with an intergenerational character (10% of the residents being viral youngsters of max 22 years old and 90% older adults of over 55 years old, who learn from each other and help each other out; the youngsters have to take a test to see if they fit and possibly buddy up with an older resident). Various types of home care are also provided, more than possible under normal legal conditions, which effectively safeguards the project against changes in government policy.</p>	<p><a href="#">link</a></p>
<p>Zorg Innovatie Huis</p>	<p>Baarn (Netherlands)</p> 	<p>A life course resilient house where older adults, informal carers, healthcare professionals, product and service providers and education stakeholders strive for innovative personalized care. The house provides an inspiring location that collects innovation and new technology for home care and makes it tangible. These smart solutions are tested and learned from in a real world setting with the goal to improve them and to share best practices. The innovations are sub-divided into four groups: (1) physical support; (2) care at a distance; (3) motion, interaction and activation; (4) autonomy and well-being. Examples include smart rollator walkers, smart beds and many robots shaped as small companions or of stuffed animals for cuddling (e.g. Dino Dirk, Maatje, flowerpot Tessa, etc).</p>	<p><a href="#">link</a></p>
<p>Het Zorg(T)huis</p>	<p>Winschoten (Netherlands)</p> 	<p>Project about showcasing technology and giving information, it integrates ideas on smart homes and on care.</p>	<p><a href="#">link</a></p>



Belevingswoning Schoneveld	Doetinchem (Netherlands) 	An 'experience' apartment showcasing how older adults can live longer at home.	<a href="#">link</a>
Huis van Zelfredzaamheid	Enschede (Netherlands) 	Project about showcasing technology and giving information, it integrates ideas on smart homes and on care.	<a href="#">link</a>
Het slimste huis	Alkmaar (Netherlands) 	Project about showcasing technology and giving information, it integrates ideas on smart homes and on care.	<a href="#">link</a>
Pilots logeertzorg	Zeist (Netherlands), also in 9 other Dutch pilot municipalities 	The 'pilots sleep-over care' are a way to temporarily lift the burden from the shoulder of informal carers. For 10 pilot municipalities the option is given for older adults with high care needs or dementia to temporarily move to a care institution to give some space to informal carers. The programme runs until 2020 and the 10 municipalities are: Westland, Capelle a/d IJssel, Dordrecht, Hoeksche Waard, Zeist, Nieuwegein, Helmond, Ede, Heerde and Assen.	<a href="#">link</a>

### 4.2.3 Exemplary pilots

Several experiments were considered particularly interesting by the interviewees, three of these are the Hogeweyk, Knarrenhof and Empatisch Wonen.

Knarrenhof is an innovative form of housing that actively involves new resident in home making and community support. It is directed at 'young older adults' and 'old older adults' who want to help each other out and to live independently as long as possible. The attitude and affinity with the neighbours are considered very important and notions of good neighborhood are central. Often those who want to reside there are socially engaged and active (doing voluntary work rather than the stereotype of 'bridge clubs and passively sitting at home') and presented as 'social people who can in principle be called upon' by their neighbours. The name 'knarrenhof' consists of two parts. The first part, 'knarren' takes its cue from characters of a popular Dutch TV show from the 1980's (van Kooten en de Bie's krasse knarren) who are presented as 'hardy old geezers' as a way to stress the agency and vitality of older adults (the logo presents an old man showing off his muscles). The second part 'hof' can be translated as 'courtyard' and refers to the type of picturesque secluded set of houses facing each other as part urban form conducive for community building. Because this urban form of the courtyard stems from the middle ages in Dutch cities and because notions of good neighborhood stem from an earlier age, the ideas are presented as 'sprung from the past ... (but) also a project for the future'.

The Hogeweyk a pioneering care facility / community for older adults with dementia. Compared to traditional nursing homes the residents with dementia are more active and live a more 'normal' life. Professionally and inhouse trained staff wear regular clothes instead of a uniform and provide the 169 residents the necessary 24-hour support in care, living and wellbeing. The 'residents, NOT patients' live in one of several housing types that fit their lifestyle (traditional, urban, cosmopolitan and formal - it used to include Indonesian,

but this will stop soon because the cohort of older adults from the former colony is getting smaller). The houses of each type are equipped with a shared living room and bedrooms for several (6-7) residents and they are located in a gated neighbourhood setting complete with general store, restaurant and theatre (hence the idea of a dementia 'village'). The walls are permeable to an extent and people from society outside are encouraged to come in as a way to eventually create a kind of 'reverse emancipation' so that society at large becomes more dementia friendly (bringing the outside world in vs bringing the inside world out; social inclusion is a major objective). The underlying vision is to get away from the large-scale medicalized institutionalized model of care home to small-scale normalized social relational model of care.



FIGURE 2: THE HOGEWYK (PICTURE BY AUTHOR DURING GUIDED TOUR)

Empatisch wonen in the city of Roermond gives substance to the vision of 'empathic living' (Empathisch Wonen) in a complex of 59 social housing apartments in a former care home. The main idea behind emphatic living is that a building can be easily transformed to adapt to changing needs of resident groups (i.e. because it is adaptable it 'lives with' older adults during their life course, but also for next cohorts of residents such younger people or families). The concept is still relatively open, currently being substantiated. The approach features elements of co-creation and is loosely related to work by visionary Dutch architects from the 1970s. On a secondary level, the emphatic living concept as used in Roermond implies certain features, such as: soft walls between one-bedroom apartments (modularity to facilitate future reshuffling of rooms); storage space close to the apartment (for a scoot mobile, but generally useful); a common room (to foster community); broad common hallways (for the scoot mobile and to foster community); lighting solutions for common hallways (daylight to foster experience or solutions with floors that indicate direction); placemaking (has to do with identity and atmosphere and the experience of living; new temperature management; fibre optic internet cabled through a technical

room in located on the same places on every floor to enable easy access and future smart solutions (to make the home 'domotics-ready'); green on balconies (for liveability).

#### 4.2.4 Support structures

Besides these tangible experiments, the Dutch context offers a range of funding and policy support programmes (see table below for an overview).

TABLE 3 – SUPPORT PROGRAMMES RELATED TO AGE-FRIENDLY HOMES IN THE NETHERLANDS

Name of program	Location	Short description	link
Blijverslening	Netherlands (nation-wide) 	Literally translated 'stayer's loan'. This a loan / Financial support mechanism by the Dutch Stimulation Fund Housing (SVn) directed to older individuals to fund adaptations to their house/apartment to age in place.	<a href="#">link</a>
Levensloopbestendige beweging	Netherlands (nation-wide) 	Social movement for intergenerational age-friendly housing spearheaded by an NGO. The 'Levensloopbestendige beweging' (life-course resilient homes, A4L in English) refers to a social movement and wider discourse spearheaded by Humanitas, a Dutch NGO. This NGO provides cost-efficient housing and care solutions that meet the physical and mental needs of older adults by mixing age groups and providing a high level of autonomy. The first building around these principles was opened in Rotterdam in 1992, which comprised 350 apartments in three complexes. Since then, the organisation has grown to incorporate 3,000 apartments across 30 sites across the Netherlands.	<a href="#">link</a>
Stimuleringsregeling E-Health Thuis (SET)	Netherlands (nation-wide) 	Subsidy programme by the Dutch national government. The Stimuleringsregeling E-Health Thuis (stimulation policy e-health at home) offers providers of care and support the opportunity to cooperate with buyers to secure and scale up e-health solutions. The idea is that older adults and persons with chronic illnesses or limitations can live at home for a longer time enabled by e-health solutions. For 2019 there is a budget of 28 million euros available for this.	<a href="#">link</a>
Programma Langer Thuis	Netherlands (nation-wide) 	Funding programme by the Dutch national government to support older adults to live independently with good quality of life in their familiar home environment. Between now and 2021 a total amount of 340 million euro is available for three kinds of measures: (1) better support for home care, (2) support for informal carers and volunteers, (3) more suitable housing for older adults. The main ministry responsible for this is the ministry of health, wellbeing and sports (VWS) in collaboration with carious other partners.	<a href="#">link</a>
Thuis is het verpleeghuis	Netherlands (nation-wide)	Policy programme by the Dutch national government. The names can be translated as 'at home in the care	<a href="#">link</a>

		home: dignity and pride for every location'. This can be traced back to the main idea presented by the Dutch minister of Health, liveability and sports in 2018 to achieve tangible improvements to nursing home care with more time and attention in the next few years. This is to be achieved through more staff who are caring, motivated and experienced and through reflection on the overall process by learning, improving and innovating.	
Een tegen eenzaamheid	Netherlands (nation-wide) 	Funding programme by the Dutch national government. The name translates as 'one against loneliness'. A broad national coalition was forged by 150 representatives of a range of stakeholders cooperate to reduce loneliness amongst older adults. This means approaching the media to gain more exposure and break taboos on loneliness, and tangibly this means mapping concrete initiatives in which people can partake, such as organized group dinners, shared sport activities and computer courses and many other things.	<a href="#">link</a>
Waardig ouder worden	Netherlands (nation-wide) 	The idea presented in a manifesto and supported by many actors translates as 'ageing with dignity'. the idea is to move towards a society 'where older persons feel seen and appreciated and in which they can actively participate'. This is a way to counter existing stereotypes of older adults. As pillars of a pact for better care for older adults, three concrete government support programmes are mentioned: Langer Thuis, Een tegen Eenzaamheid and Thuis in het verpleeghuis (home in the nursing home).	<a href="#">link</a>
Lang zult u wonen	Netherlands (nation-wide) 	Translated this campaign / programme would be called 'long shall you dwell'. The agenda is to show people how to adapt their home to age there. It gives tips and tricks, provides space to brand products and tells which concrete events are being organized in different municipalities throughout the country.	<a href="#">link</a>

## 4.3 Ireland

### 4.3.1 Background

Health spending per capita in Ireland is higher than in most EU countries. Around 70% of health spending is publicly funded, which is well below the EU average. Long-term care (LTC) in Ireland is relatively low and organised and provided by the National government with the Health Service Executive (HSE). Government policy is to support older people to live at home and in their communities for as long as possible. Where this is not feasible, for whatever reason, 'supports' are provided to access high quality long term residential care (the term housing with supports rings across many of the experiments in Ireland).



Rented accommodation has is gaining in prominence and the number of owner-occupied households fell between 2011 and 2016. An important background condition for housing domain in Ireland is the severe housing crisis in the wake of the 2008 global recession. Building projects ground to a halt and housing prices plummeted – a stark contrast compared to growth of the Celtic Tiger years in the early 2000s. Interviewees make not of situations where families being relocated to hotel and in pressing need of housing, which might explain the focus on 'rightsizing' (i.e. downsizing) the dwellings of older adults in order to make room. Recent research shows that 80% of adults aged 55 and older are positive towards adapting their current home to allow them to remain living independently, 33% would consider moving to adapted housing and 80% are negative towards moving into a nursing home (Age Friendly Ireland 2016).

For more information see the country reports being developed in conjunction with WP2.1.

### 4.3.2 Overview






A more detailed overview of age-friendly home experiments identified in Ireland is presented in the table below.

TABLE 4 – OVERVIEW OF EXPERIMENTS RELATED TO AGE-FRIENDLY HOMES IN IRELAND

Name of experiment	Location	Short description	link
Great Northern Haven	Dundalk (Ireland) 	A new housing project with 16 apartments (including one showroom and testing apartment) built to support 'life-time adaptability' and Active Assisted Living for older adults. Each apartment is equipped with sensors and interactive technology to support telecare.	<a href="#">link</a>
AVA pilot house / the Abhaile Project	Dublin (Ireland) 	AVA housing offers a solution in the domain of 'home sharing', which offers an alternative to older homeowners whereby their homes are adapted to their future needs whilst also creating a rental capacity within their home. This provides financial benefits and a sense of security and	<a href="#">link</a>

		community for homeowners. The innovative part is the total package of guidance, support and expertise to the homeowner through the process of retrofitting and sharing arrangements. This particular pilot project put these home sharing into practice in a three-bedroom semi-detached house. The severe housing crisis in Ireland is part of the reason why these kinds of home sharing innovations are gaining momentum.	
Elder Home Share	Ireland (nationwide) 	New platform that allows older homeowners to continue to live at home with a greater degree of security at night, companionship and help with practical tasks such as light housework and shopping. The other side of the match is a responsible and caring (younger) person who wants an affordable living situation in exchange for sleeping in the house 5 to 6 nights a week and providing 8 hours a week companionship and support. The severe housing crisis in Ireland is part of the reason why these kinds of home sharing innovations are gaining momentum.	<a href="#">link</a>
Inchicore Housing with Supports	Dublin (Ireland) 	Planned housing project with 52 apartments to develop a new model of 'housing with supports' for older adults, featuring a physical environment adapted according to universal design principles and appropriate care and supports provided on site, integrated within the local community.	<a href="#">link</a>
Broome Lodge	Dublin (Ireland) 	43 new apartments built according to Universal Design criteria and rented out social housing by an approved housing body.	<a href="#">link</a>
Proudstown	Navan (Ireland) 	4 new apartments built on a previously derelict site. Small-scale development that also features renewable energy innovations.	<a href="#">link</a>
McAuley Place	Naas (Ireland) 	a non-medical, intergenerational and not-for-profit housing association with 53 apartments for social and private housing.	<a href="#">link</a>
Colivet Court	Southill (Ireland) 	35 apartments designed to be a catalyst in both the social and physical regeneration of the area, generating a sense of pride, empowerment, ownership and mutual respect.	<a href="#">link</a>
Leighlinbridge Housing	Leighlinbridge (Ireland) 	15 apartments on the grounds of an old presbytery building, provides for security and passive-surveillance and a sense of community.	<a href="#">link</a>
Father Lemass Court	Dublin (Ireland) 	32 apartments with the goal to create a community through the provision of a central courtyard with an adjoining community room and a communal roof garden, all designed so as to provide passive supervision and social contact.	<a href="#">link</a>
SVP Malahide	Dublin (Ireland) 	37 apartments devised over two ranges of housing along opposing sides of the site. This makes the enclosed garden the central focal point, which provides a secure ambience that maximizes passive surveillance and generates an environment of communal engagement.	<a href="#">link</a>
Rochestown House	Dublin (Ireland)	34 apartments from the 1970s undergoing a deep energy retrofit to counter fuel poverty and geared to maximize the number of units on this site, which is close to existing services	<a href="#">link</a>



		and public transport (this way underused larger council owned houses become available for larger families).	
Glór Na Srútha	Cloncara (Ireland) 	12 apartments in a rural village setting and incorporating Age Friendly Design guidelines and universal design principles. Lifetime adaptability, efficiency of technology, and integration with the existing community were all key components (the design responded to site contours and poor ground conditions, and the traditional styles of clustered communities in the locality. The overall design creates a sense of community enclosure through the slow curve of the design whilst retaining its connectivity with adjoining housing scheme through a pedestrian link).	<a href="#">link</a>
Cuan an Chláir	Ennis (Ireland) 	12 houses and communal facilities. Funding was received from a mix of government funding and other sources based on donations, local fundraising and land allocated by the church.	<a href="#">link</a>
Ballygall	Dublin (Ireland) 	39 apartments from the 1970s, remodelled, refurbished and energy retrofitted and fully accessible.	<a href="#">link</a>
Annamore Court	Dublin (Ireland) 	70 newly built social apartments in an existing derelict 1960s social housing scheme with a higher density development (this way underused larger council owned houses become available for larger families). Additional supports and services are provided on site with the aim of supporting independent living in the community for as long as possible. This was the first social housing new-build to benefit from funding provided by the Housing Finance Agency and the European Investment Bank.	<a href="#">link</a>

### 4.3.3 Exemplary pilots

Two projects that were considered particularly interesting by the interviewees are the Great Northern Haven and AVA pilot house project.

The Great Northern Haven is a new housing project operational for several years now. It features 16 apartments (including one showroom and testing apartment) built to support 'life-time adaptability' and Active Assisted Living for older adults. Each apartment is equipped with sensors and interactive technology to support telecare. To an extent, the experiment has been used as a way to convince developers to adopt universal design by making them 'walk in the shoes of a frailer older person'. All interviewees in Ireland are familiar with this high-profile experiment. A point of criticism voiced by many is that some of its features seem hospital-like and that it heavily relies on technology. Some of the wiring is now obsolete since smart Wi-Fi solutions were not as prevalent when it was initially designed.




FIGURE 3: THE GREAT NORTHERN HAVEN (PICTURE BY AUTHOR DURING GUIDED TOUR)

The idea of AVA housing is to facilitate and organise 'home sharing' through a new business model. The idea was familiar to many interviewees and regarded as visionary. This offers an alternative to older homeowners whereby their homes are adapted to their future needs whilst also creating a rental capacity within their home. The concept provides financial benefits and a sense of security and community for homeowners. The innovative part is the total package of guidance, support and expertise to the homeowner through the process of retrofitting and sharing arrangements. This particular pilot project puts these home sharing into practice in a three-bedroom semi-detached house.





#### 4.3.4 Support structures

Besides these tangible experiments, Ireland offers a particularly rich support context since age-friendly housing and the wider agenda of moving towards of an age-friendly society have clearly gained momentum. This is evident in the large amount of national and local support programmes (see table below for an overview).

TABLE 5 – SUPPORT PROGRAMS RELATED TO AGE-FRIENDLY HOMES IN IRELAND

Name of programme	Location	Short description	link
Cúltaca	Louth County (Ireland) 	The Cúltaca is a county-level initiative; its core feature is a person-centred approach to the support of older people, achieved by working one to one with them in their own home. Cúltaca is an Irish word that means strong support or backup. Two Cúltaca, work in Dundalk in County Louth. They act as a liaison between the statutory and non-statutory services and the older person to break down some of the barriers that are experienced.	<a href="#">link</a>
NPAS & HaPAI	national level (Ireland)	The National Positive Ageing Strategy (NPAS, 2013) set out a vision for ageing and older people that will 'act as a	<a href="#">link</a>



		catalyst' for action. It can be seen in a similar light as the Healthy and Positive Ageing Initiative (HaPAI). This supports the concept of ageing in place under Goal 3 "to enable people to age with confidence, security and dignity in their own homes and communities for as long as possible". It is a high-level commitment from the Irish government outlining a vision for ageing and older people. It is an over-arching cross-departmental policy that serves as a blueprint for age-related policy and service delivery across national government. This is closely in line with the WHO Active Ageing policy framework.	
Dublin Declaration	national level (Ireland) 	The Dublin Declaration on Age-Friendly Cities and Communities was signed by mayors and senior political representatives of European cities, municipalities, communities and regions during the EU Summit on Active and Healthy Ageing. Building on the original declaration signed in 2011, this updated framework establishes a commitment from signatories to uphold a set of principles to measure, benchmark, and drive future development of age friendly cities, using the WHO's Global Age-Friendly Cities Guide as a model.	<a href="#">link</a>
Age Friendly Cities and Counties Programme	national level (Ireland) 	The Age Friendly Cities and Counties Programme is run by effective city- and county-based alliances that involve public, commercial and non-profit organizations. Age Friendly Ireland assists these alliances aim to streamline the work of all key players at local level, putting the views, interests and needs of older people at their core. Through an Older People's Council in each participating local authority area older people exercise a strong, guiding influence on age-friendly local development.	<a href="#">link</a>
Older People's Councils	e.g. Louth County and many other counties followed (Ireland) 	A representative group of older people established by local authorities as part of the development of the Age Friendly City/County programme. The group of older people identify priority areas of need and raise issues of importance and inform and influence the decision-making process of the City or County Age Friendly initiative. Representatives of Older People's Councils participate, alongside representatives of the relevant member agencies, on the Age Friendly City/County Alliance. The way this is organized exactly differs from county to county. The important point is that the Older People's Council is formed before the Age Friendly Strategy is finalised so that this group of people can have input into the various actions in the strategy.	<a href="#">link</a>

## 4.4 France

### 4.4.1 Background

Health spending in France is higher than in most other EU countries, with health expenditure reaching (11.1% of GDP, well above the EU average of 9.9%).. Because over three-quarters of health expenditure is publicly funded and complementary health insurance plays an important role, the share of out-of-pocket spending is the lowest among EU countries (OECD 2017).


Currently, individual housing accounts for a bit over half of all dwellings (small part of it second / holiday homes). This share is declining slightly as the number of collective dwellings is growing faster than that of individual dwellings due to recent developments in new construction, so there seems to be a slight move away from single-family homes in favour of apartments in multi-family dwellings.







For more information see the country reports being developed in conjunction with WP2.1.

### 4.4.2 Overview

A more detailed overview of age-friendly home experiments identified in France is presented in the table below.

TABLE 6 – OVERVIEW OF EXPERIMENTS RELATED TO AGE-FRIENDLY HOMES IN FRANCE

Name of experiment	Location	Short description	link
27 Delvalle	Nice (France) 	A centre on connected health and healthy ageing, which includes a model apartment that is designed as a showcase and a testing platform for technologies supporting independent living and autonomy. The Habitat platform of 27 Delvalle is a space dedicated to health and autonomy and facilitates cooperation between a variety of regional stakeholders (Overarching network includes FRANCE SILVER ÉCO, Nice Côte d'Azur Metropolis incubator, CIU Santé, PAILLON2020 and more). It relies in particular on the ecosystem of services dedicated to the loss of autonomy. It prepares the return and promotes the home support of vulnerable people and / or people with disabilities around their personal life project. The 'demonstration, simulation and experimentation apartment' is equipped with various digital technologies and innovative devices and is set up to provide advice and solutions to users, their families, caregivers and health professionals. In addition, researchers and industry meet to develop innovative technologies. The objectives are to: (1) Inform, raise awareness and test; (2) Facilitate home return and home support; (3) Train medical professionals in new technologies; (4) Innovate with research by connecting	<a href="#">link</a>

		users, professionals, researchers and industry to be a market access facilitator for businesses.	
La Maison Des Babayagas	Paris (France) 	La Maison Des Babayagas is a feminist cohabitation project that started in Montreuil, in the surroundings of Paris in 2013 (Babalyagas is a Slavic term for witch). A group of dynamic women have devised a new kind of communal living for older women based on shared values of feminism and activism. La Maison Des Babayagas is a self-managed social housing project composed of 21 apartments for women over 60, and 4 apartments for young adults below 30; the dwellings are still owned by a social housing landlord. Based on four pillars (self-management, solidarity, citizenship and ecology), this "anti-retirement home" aims to facilitate contacts and mutual care between the community members. One of the main motivations for creating the Babayagas house was battling social isolation and many community projects and social activities are organised both by the inhabitants and with the surrounding community, the two rooms on the ground floor of the building being two municipal rooms.	<a href="#">link</a>
Vivre aux Vignes	Grenoble (France) 	A communal living facility that amounts to a novel housing formula with pooled services and care. It is conceptually in between an individual a home and a nursing home and also aimed at older adults with a modest budget.	<a href="#">link</a>
Alzheimer Village Landais	Dax (France) 	An Alzheimer village in the Southwest of France, inspired by the Dutch project, the Hogeweyk (see the part on the Netherlands in chapter 4).	<a href="#">link</a>
La Note Bleue	Limonest (France) 	A residence complex to support ageing in place through adapted housing with 23 units of which 17 are equipped to accommodate people with loss of autonomy.	<a href="#">link</a>
Andromede intergeneration district & Modulab	Blagnac (France) 	20 houses and 80 apartments are of part of the Andromède intergenerational district, located in Blagnac. The latter is made up of evolving housing that can be adapted to the various stages of life and especially to the loss of autonomy. On this site is also collective building called the Modu-Lab.	<a href="#">link</a>
Bailleur social	Lille (France) 	Small experiment implementing a modular housing system.	<a href="#">link</a>

#### 4.4.3 Exemplary pilots

Two projects that are considered particularly interesting are 27 Delvalle and Maison Babayagas. Interestingly, these two present radically opposite approaches to addressing age-friendly homes. The first is technologically innovative, medicalized and entrepreneurial; and the second is a feat of conceptual innovation, intentional and community oriented without a focus on new technology or economic development.

27 Delvalle is a centre on connected health and healthy ageing, which includes a model apartment that is designed as a showcase and a testing platform for technologies supporting independent living and autonomy. The Habitat platform of 27 Delvalle is a space dedicated to health and autonomy and facilitates cooperation between a variety

of regional stakeholders (Overarching network includes FRANCE SILVER ÉCO, Nice Côte d'Azur Metropolis incubator, CIU Santé, PAILLON2020 and more). It relies in particular on the ecosystem of services dedicated to the loss of autonomy. It prepares the return and promotes the home support of vulnerable people and / or people with disabilities around their personal life project. The 'demonstration, simulation and experimentation apartment' is equipped with various digital technologies and innovative devices and is set up to provide advice and solutions to users, their families, caregivers and health professionals. In addition, researchers and industry meet to develop innovative technologies. The objectives are to: (1) Inform, raise awareness and test; (2) Facilitate home return and home support; (3) Train medical professionals in new technologies; (4) Innovate with research by connecting users, professionals, researchers and industry to be a market access facilitator for businesses.



FIGURE 4: 27 DELVALLE (PICTURE BY AUTHOR DURING GUIDED TOUR)





La Maison Des Babayagas is a feminist cohabitation project that started in Montreuil, in the surroundings of Paris in 2013 (Babalyagas is a Slavic term for witch). A group of dynamic women have devised a new kind of communal living for older women based on shared values of feminism and activism. La Maison Des Babayagas is a self-managed social housing project composed of 21 apartments for women over 60, and 4 apartments for young adults below 30; the dwellings are still owned by a social housing landlord. Based on four pillars (self-management, solidarity, citizenship and ecology), this "anti-retirement home" aims to facilitate contacts and mutual care between the community members. One of the main motivations for creating the Babayagas house was battling social

isolation and many community projects and social activities are organised both by the inhabitants and with the surrounding community, the two rooms on the ground floor of the building being two municipal rooms.

#### 4.4.4 Support structures

Besides these tangible experiments, much is happening in France, but it was hard in a short time to form a clear overview. A range of more meta-level initiatives that provide governance and entrepreneurial support have been identified (see table below).

TABLE 7 – SUPPORT INITIATIVES RELATED TO AGE-FRIENDLY HOMES IN FRANCE

Name of programme	Location	Short description	link
BDCO	Boulogne-sur-mer (France) 	Part of a bigger European project called Age Independent (AGE'IN). In this context the BDCO project is seen as a project for 'social innovation'. The AGE'IN project aims to keep the ageing population independent for longer at their own home/chosen home through a strategy combining house adaptations with the development of a real local ecosystem. The project should contribute to quality of life and the quality of the environment, services provision, safety and public spaces. The project will be delivered through the creation of comprehensive and coherent partnerships in conjunction with house adaptations, digital solutions and apps, with an expected result of creating a change in policy towards the prevention of the loss of autonomy of older adults. The project is less than a year old, but in the near future it wants to achieve interesting outputs, including (1) demonstration actions to empower 55+ to better adapt their housing to remain independent at home for a longer time; (2) pilot actions to improve the offer of adapted houses and public spaces; (3) development and testing of training schemes on housing improvements for older adults; (4) test carious existing digital technology and home automation systems designed for older adults.	<a href="#">link</a>
FRANCE SILVER ÉCO	head office planned in Nice (France) 	The Association France Silver Eco is part of a national-level structure in charge of developing the Silver economy and its national ecosystem. (Also see 27 Delvalle).	<a href="#">link</a>
Nice Côte d'Azur Metropolis incubator	Nice (France) 	Certified as a European Centre for Innovative Companies. (Also see 27 Delvalle).	<a href="#">link</a>
Centre for Home-based e-Health and Autonomy	head office in Nice (France) 	Association Innovative Centre for Home-based e-Health and Autonomy (CIU Santé).	<a href="#">link</a>



Gerontopoles	Région SUD - PACA (France) 	French Région SUD (PACA) wants to create a "gerontopole". Several Gerontopoles exist in France (see <a href="http://www.marchedesseniors.com/silver-economie/les-gerontopoles-en-france/21338">http://www.marchedesseniors.com/silver-economie/les-gerontopoles-en-france/21338</a> for a list). These Gerontopoles represent clusters aiming to bring together players for: (1) high-level research and innovation, (2) the implementation of new solutions to prevent and manage frailty as well as support autonomy in older age, (3) project management and cross-sectorial collaborations around ageing.	<a href="#">link</a>
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## 4.5 Poland



### 4.5.1 Background

Poland has a relatively young population, but it is ageing in an unprecedented rate. Governmental responsibility for care for older adults is mainly by municipalities and there are large differences between municipalities in terms of quality of care. Co-funding by older adults or their relatives is required for a stay in a public nursing or care home. Over 80% of flats is privately owned and social housing hardly exists, which is problematic for lower income groups who can hardly afford market prices. The apartments inhabited by Polish seniors are generally not well adapted to their needs, with as a consequence high maintenance costs and barriers to accessibility. Formal age-friendly living standards do not really exist, but there several are experiments to provide innovative alternative, mainly organized in a bottom-up way by on NGOs or the private sector.





### 4.5.2 Overview

A more detailed overview of age-friendly home experiments identified in Poland is presented in the table below.










TABLE 8 – OVERVIEW OF EXPERIMENTS RELATED TO AGE-FRIENDLY HOMES IN POLAND

Name of experiment	location	Short description	link
Mimo Wiek apartment	Warsaw (Poland) 	The U Siebie Mimo Wiek ('at home despite the age') showroom apartment presents a comprehensive set of solutions how to enable older adults to have an active and independent life in their own home. It is the first apartment of this kind in Poland and designed according to best practices regarding accessibility, health, wellbeing and equipped with modern devices to assist older adults and person with disabilities. On about 50 square meters a well-designed space has been created for a single person or a couple. It is free of physical barriers and ready for upgrades with regard to equipment and amenities. The well thought out design, devised by specialized architects, includes solutions with regard to the main aspects of comfort, ergonomics, daylight, illumination and views, indoor air quality, temperature, humidity and air movement and acoustics.	<a href="#">link</a>
Stalowa 29	Warsaw (Poland) 	This intergenerational apartment building is one of the first cohousing solutions in Poland to be inhabited by people from various age groups. It is a retrofit of an older building (renovation is ongoing at this time) and the idea is that serve as a model for a modern, sustainable and well-designed housing modernisation under the Integrated Revitalization Program in the Praga district (it is mostly paid for by city of Warsaw). It is also geared to counter negative effects of	<a href="#">link</a>



		<p>gentrification and to encourage residents to help one another. On the last two floors, there will be a care and educational institution for youths. On each of the other floors, 4 apartments are planned (12 in total). On the ground floor a space for the local community will be created in the form of a café or other meeting place (how exactly is yet to be determined). Intergenerational design, countering negative effects of gentrification and encouraging residents to help one another are key elements.</p>	
Wólczańska 168	<p>Lodz (Poland)</p> 	<p>This integrational house was partly inspired by the Warsaw Stalowa 29 exemplar but is now actually at a further stage. This project is about converting a 1883 villa to fit with senior apartments. The project was initiated by seniors from the Forum for the Fatherland Association, who in 2013 submitted their project "Multi-generational House" to the Citizens' Budget competition where it gained interest among members of the City Council, who in the next year indicated the property at Wólczańska 168 Street for the Multi-generational House. The funds were secured for a thorough renovation with the adaptation of flats to the needs of the older people, with disabilities (handles in bathrooms, floor showers, no architectural barriers). In 2016, an interdisciplinary team was established within the office, responsible for the development of the Multi-generational House operation program, the work of which in 2018 was supported by the expert team of the Laboratory Foundation for Architecture 60+ as part of a pilot project of revitalization (carried out on behalf of the Ministry of Investment and Development from European funds). The developed model is currently being implemented. Soon the first residents should move in (in accordance with the recommended social mix), an NGO has been running the Neighbourhood Club - a place for meetings and integration of future tenants and neighbourhood - on the site.</p>	<a href="#">link</a>
Inter-generational tenement house Szczecin	<p>Szczecin (Poland)</p> 	<p>A multi-generational house actually in operation. It seems to be project with senior apartment linked to an orphanage to foster the multi-generation exchange of support (though not much information could be found about this).</p>	<a href="#">link</a>
Sheltered housing tenants are waiting for	<p>Ostrów Wielkopolski (Poland)</p> 	<p>14 sheltered apartments were created as part of a larger program in response to the needs of a growing number of seniors and the lack of flats currently dedicated to people 60+ in Ostrów Wielkopolski. Common problems faced by seniors include stairs, no elevator, and a lack of help. This project aims to solve these issues. It is divided into 2 tasks: Sheltered housing Municipal housing Ostrów decided to implement the 1st sheltered flat in order to offer support to seniors who require assistance in everyday functioning, but don't have support from their family, and don't need service 24/7. It is an alternative to a Social Welfare Home. The Apartments are built in 2 buildings and are adapted to the needs of seniors (lift, wide corridors). They are in the town centre, close to a church and a bus stop. The 14 apartments are geared to find out more about the needs of needs older adults (a needs-assessment is conducted).</p>	<a href="#">link</a>
Orpea Polska Mieszkania dla seniorów	<p>Wroclaw (Poland)</p> 	<p>Housing investment dedicated to older people and independent apartments dedicated to older people with or without assistant needs.</p>	<a href="#">link</a>



Orpea stoya rest home	Warsaw area (Poland) 	Like the Orpea Polska Mieszkania dla seniorów example above, also a type of alternative nursing home by Orpea.	<a href="#">link</a>
Dom dla seniora Szczecin	Szczecin (Poland) 	Dom dla seniora (translated Senior Citizen's Home) features 15 well-designed apartments (12 one-room units and 3 two-room units). They are located in a building located in the city centre of Szczecin, which is equipped with an elevator and designed with older adults in mind, i.e. without architectural barriers.	<a href="#">link</a>
Assisted living flats Szczecin	Szczecin (Poland) 	38 assisted living flats for older adults funded local government (though not much information could be found about this).	<a href="#">link</a>
Assisted living in Stargard	Stargard Szczeciński (Poland) 	Social housing for older adults with the help of ICT systems and volunteers, the first of this type in Poland. Further search of a WHO database suggests that there are 24 apartments and that this is part of the 'house needed' program and the 'not alone' program (though not much information could be found about this).	<a href="#">link</a>
Mieszkania dla seniorow	Poznan (Poland) 	141 apartments designed exclusively for seniors are located in three buildings. These apartments are intended for older people who have applied for housing in the past but have not received them due to the lack of such a possibility. The apartments became available due to signed collaborations between the city of Poznan and a TBS (a TBS is an institution for a particulate category of semi-social housing).	<a href="#">link</a>
Dom Seniora Opole	Opole (Poland) 	102 rental apartments for rent in the TBS Senior system, with 3 buildings of 34 apartments in each. In each building there is a room for shared use by residents (a common room) and facilities for those with mobility impairments.	<a href="#">link</a>
Osiedle senioralne	Warsaw (Poland) 	Presented as the First Senior Housing Estate in Poland, which provides an alternative to a nursing home. It is suggested that people feel guilty when they put their parents in a nursing home, but that they should not feel guilty if their parents move to this type of living arrangement. There are 1-bedroom and 2-bedroom apartments available and there is a rehabilitation program to various conditions.	<a href="#">link</a>
Angel Care centrum seniora	Wroclaw (Poland) 	Angel Care is a nursing home with high-quality nursing support and high-level facilities. This 'best nursing home' consist of 48 fully furnished and safe apartments designed for one or two people. In addition. The complex will offer its permanent residents individually designed facilities and tailor-made entertainment and room for their own hobbies. In addition, 24-hour nursing, physiotherapy and medical support and specialized beds for medical care are provided. There is a library, common space and workplaces.	<a href="#">link</a>
Senioral Apart Hotel Zarabia	Bielsko-Biała (Poland) 	Apartments for older adults on with proximity of mountains and rivers or ski resorts. Their unique selling point is the excellent geographical location.	<a href="#">link</a>

### 4.5.3 Exemplary pilots

A experiment that is considered particularly interesting are U Siebie Mimo Wieku, which is a unique project in Poland with a focus on tangible high-level design. Another interesting experiment is Stalowa 29, which is a project that representative of a focus intergenerational housing which is direction now explored by an increasing number of age-friendly home innovators in Poland.

The U Siebie Mimo Wieku ('at home despite the age') showroom apartment presents a comprehensive set of solutions how to enable older adults to have an active and independent life in their own home. It is the first apartment of this kind in Poland and designed according to best practices regarding accessibility, health, wellbeing and equipped with modern devices to assist older adults and person with disabilities. On about 50 square meters a well-designed space has been created for a single person or a couple. It is free of physical barriers and ready for upgrades with regard to equipment and amenities. The well thought spatial and physical arrangement, designed by specialized architects, includes solutions with regard to the main aspects of comfort, ergonomics, daylight, illumination and views, indoor air quality, temperature, humidity and air movement and acoustics. The entire array of specially designed building features and smart products make this 'larger than the sum of its parts'. Another goal aimed at is to get companies in Poland to see older adults as a relevant market for products and services.



FIGURE 5: MIMO WIEKU APARTMENT (PICTURE BY AUTHOR DURING GUIDED TOUR)





This Stalowa 29 intergenerational apartment building is one of the first cohousing solutions in Poland to be inhabited by people from various age groups. It is a retrofit of an older building (renovation is ongoing at this time) and the idea is that it serves as a model for a modern, sustainable and well-designed housing modernisation under the Integrated





Revitalization Program in the Praga district (it is mostly paid for by city of Warsaw). It is also geared to counter negative effects of gentrification and to encourage residents to help one another. On the last two floors, there will be a care and educational institution for youths. On each of the other floors, 4 apartments are planned (12 in total). On the ground floor a space for the local community will be created in the form of a café or other meeting place (how exactly is yet to be determined). Intergenerational design, countering negative effects of gentrification and encouraging residents to help one another are key elements. One critical note would be that these projects are difficult to implement because they feature social housing and according to the rules the next person in line qualifies for the apartment. Selecting people deliberately based on age and skipping others in line might be hard to justify.






#### 4.5.4 Support structures

Besides these tangible experiments, a range of more meta-level initiatives that provide governance and entrepreneurial support have been identified (see table below)

TABLE 9 – SUPPORT INITIATIVES RELATED TO AGE-FRIENDLY HOMES IN POLAND

Name of programme	location	Short description	link
Councils of Seniors	nation-wide (Poland) 	There is a nation-wide Agreement of Senior Councils. This supports training for senior citizens in Poland, advocacy in Parliament and cooperation with the Parliamentary Policy Committee the senior. For instance, in Ostrów Wielkopolski there is a City Senior Council that operates as an advisory body of the authorities of the town which consists of 8 members elected by non-governmental organizations. The Council formulates their opinions on strategic and current plans of the town and proposes its own ideas; the Senior Council is involved in the creation of the senior policy in Ostrów Wielkopolski. The needs of seniors are consulted during meetings of this council. The aim of the project is to support the autonomy of seniors, as well as to provide them with housing that they might otherwise be missing.	<a href="#">link</a>
Warsaw Social District	Warsaw (Poland) 	Experimental project of accessible housing in Warsaw. As part of this wider agenda there is also a senior dedicated component.	<a href="#">link</a>
PASIOS	Krakow (Poland) 	PASIOS is a Local Program of Social Participation and Integration of Older Persons (2015-2020). It represents Fruitful policy-level collaboration between academic researchers, advocacy organisations and policy makers.	<a href="#">link</a>
HoCare 2.0	Malopolska region (Poland) 	Delivery and deployment of Innovative solutions for Home Care by strengthening quadruple helix cooperation and applying principles of co-creation in territorial innovation ecosystems. Supported by Interreg Central Europe. Malopolska is one of the many Central European regions involved (11 partners from 6 countries joined forces to be	<a href="#">link</a>

		the catalyst of change towards Open Innovation 2.0 ecosystems and to boost implementation of RIS3 in their territories). Outcomes included: a transregional network of CO-CREATION LABS; Transregional network of CO-CREATION LABS; a Common Strategy; Regional Action Plans; an SME Tool and a Policy Tool; Pilots as Good practices involving 12 SMEs and 6 Public providers of public services, using co-creation.	
Dostępność Plus	nation-wide (Poland) 	Dostępność Plus (or 'accessibility plus') is a government program that indicates that the ageing society is becoming a priority for national government's social and spatial policy. This program supports 8 areas: architecture, transport, education, health care, digitization, services, competitiveness and coordination. It also seems that 'housing plus' is a distinct category of state-supported housing; more private than communal housing, social housing and TBS, but less private than true commercial housing development.	<a href="#">link</a>
Silver Malopolska	Malopolska region (Poland) 	Malopolska regional management board has set itself the following tasks: 1) promotion and protection of health, 2) social assistance, 3) supporting families and the foster care system. The Marshal's Office of the Malopolska Region has a Department of Sustainable Development.	<a href="#">link</a>
Building and developing ecosystems for active and healthy ageing (ITHAKA Interreg Europe)	Malopolska region (Poland) 	Implementation of innovative solutions for active and healthy ageing, including activation of older people and disabled people in healthcare and social care. HOW? (1) Self-Assessment of existing solutions and potential in smart healthcare and social care; (2) Preparation of the Strategy for boosting innovation for smart healthcare and social care – with involvement of all types of stakeholders (quadruple helix – public authorities, universities, business and 3rd sector/NGOs); (3) Action Plans – regional implementation. The project is using new tools, such as facilitation workshop, design thinking, open space, world cafe etc. WHO? Regional Partnership consisted of key stakeholders to foster mutual learning. Concretely, through international workshops and EEPE Exchange of Experience and Peer Evaluation Events in each partner region. This last EEPE took place in Malopolska in 2019.	<a href="#">link</a>
Centres of Senior Activity	Krakow (Poland) - also in many other Polish cities 	Persons over 60+ can meet on weekdays for various activities in these centres. The Centres need to be opened for at least 4 h per day, are financed from the city's budget (seniors pay just about 1 € as a membership fee per month). Social participation is also possible via other formal and informal programmes, groups organised by non-governmental organisations, senior clubs, Universities of the Third Age etc. In order to promote the participation of older citizens, there are opportunities to visit museums, theatres, and concert halls for free or at a reduced rate. According to Anna Okonska-Walkowicz, who coordinates a network of these about 40 centres in Krakow (see map in her presentation for locations), this constitutes as an 'innovative systematic urban solution'. The overall goal is to build a more positive and civically active image of older people (Krakow for senior with seniors), stressing that the development of a person lasts all his/her life taking into account psychological	<a href="#">link</a>

		needs for recognition, respect, acceptance, belonging and a sense of meaning in life.	
Malopolska Tele-angel	Malopolska region (Poland) 	With a 365/24/7 Telecare System Centre, the Malopolska Region supports its inhabitants who are not fully independent. Project geared to monitoring bodily functions, such as ECG by telemedical and telecare systems - remote examination, consultation, and diagnosis - guidance on healthy lifestyle and active ageing.	<a href="#">link</a>
The Incubator for Social Innovations	Malopolska region (Poland) 	ongoing eco-system that has sparked concrete pilot projects. This program supports and strengthen social innovators - NGO's, citizens, education, business - anyone who can see the potential social change and is willing to test his idea in the field of seniors and disabled people. The innovations can be products, services or models addressing unmet needs more effectively. These micro-innovations are supported by grants up to 23800 Euro, for a period of testing up to 6 months. On concrete example seems to be a game for seniors with colourful puzzle blocks.	<a href="#">link</a>
AHATHON	Krakow (Poland) 	The AHATHON, organized in Krakow in 2019, was basically a 'hackathon' aimed at AHA (active and healthy ageing). The goal of the AHATHON was a quick definition and presentation of practical ideas for solving small and large problems and needs of older people. These problems can affect their everyday life both at home (place of residence) or away from home – i.e. in places where they are resting, learning, meeting friends, healing, having fun or traveling. The teams consisted of older and younger people working together. Surprisingly, all but one of the ideas presented constituted a social innovation rather than a technical innovation (e.g. a new mode of organizing common dinners between young and old, etc).	<a href="#">link</a>
PLACES+	Warsaw (Poland) 	PLACES + is a program aimed to develop products and ideas to improve older people's mobility. In collaborative work of designers and seniors 10 products were created that will help older people to stay active and connected. Some of these are in the process of being implemented in Warsaw. These well-designed products include various ideas for sitting or resting on the pavement, such as a quasi-bench (for resting and getting up without any effort for the knees), sitting bollards (street bollards transformed into sitting place), seating covers for public flower pots in winter, and a new Warsaw ZOO map (including location of toilets, public transport directions, species of animals, opening hours. Graphic design approaches visually impaired persons, etc).	<a href="#">link</a>
Pleniny Daytime Stay Houses	Malopolska region (Poland) 	Project with three municipalities to establish day care facilities for dependent older persons and implementation of care services and support for their carers through implementation of a certified model of care services based on OK SENIOR quality standards developed by KIGS. Services will provide care and activation of older people, aimed at leaving them as long as possible in their place of residence and constituting significant support in their daily functioning, as well as the functioning of their families. Establishment and operation of facilities will provide older people care and activation to the highest quality standards: maintaining an optimal psychophysical state,	<a href="#">link</a>



		<p>independence and activity, stopping the deepening of social and health dysfunctions<sup>2</sup>. The project is the result of cooperation between self-government authorities of neighbouring communities of the Nowy Targ powiat and the National Institute of Silver Economy in Warsaw, specializing in advising local governments in organizing the senior economy. The main reason for the project implementation is the access barrier or total lack of access to day care and caring services and activating for dependent persons.</p>	
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## 5 Conclusion: implications and reflections

### 5.1 Readiness levels

The four countries that were analysed (the Netherlands, France, Poland and Ireland) can be compared in terms of the activities in the emerging domain of age-friendly homes. It should be noted that a general assessment of a range of structural elements in the different countries (demographic development, care provision, housing stock, etc.) was offered in the country reports being developed in conjunction with WP2.1. Therefore, this section will not repeat this exercise to provide an assessment based on general socio-economic variables, but instead it will provide a **qualitative assessment based on innovation activities related to age-friendly homes**.

As argued in chapter 2 of this report, 'age-friendly homes' constitute an emerging domain – not a consolidated field – that is best conceptualized as a patchwork of multiple interacting regimes related to housing, care and ICT. This makes the definition of a single definitive readiness level a challenge in itself. As an alternative, we propose below (1) a qualitative description of each of the country's situation as a way to compare the four countries in terms of the progress that has been made in the domain of age-friendly homes; and (2) an alternative take on readiness levels related to innovation pathways.

Ireland offers a particularly interesting support context since age-friendly housing and the wider agenda of moving towards an age-friendly society have clearly gained momentum. This is evident in the large amount of national and local support programmes in line with WHO guidelines, and the attention for Universal Design criteria in many planned projects. Age-friendly housing has been successfully positioned on the political agenda and innovative experiments have emerged as a consequence of this, but the experiments have also contributed in bringing actors together to articulate and empower this agenda in the first place. One thing that plays at the background is the ongoing housing crisis, which has resulted in ideas about freeing up larger family homes and relocating older adults to smaller suitable apartments that have to be built first. Besides many small-scale projects designed with Universal Design criteria, there are also several very innovative experiments such as the Great Northern Haven (technologically innovative) and the new ways of facilitating home-sharing (conceptually innovative). Overall, **in Ireland there are different innovative experiments and a willing coalition of housing and government agencies that offer support**.

France also shows a wide array of age-friendly home experiments. The broadness of this pallet of activities is exemplified by radically different focus of the two experiments of 27 Delvalle and Maison Babayagas – the first one is technologically innovative, medicalized and entrepreneurial; and the second one conceptually innovative, intentional and community oriented without a focus on new technology or economic development. **Many projects could be found in France in the same vein as the 27 Delvalle project, building on the synergy between the development of new technologies and associated promises of economic activity**. The idea of fostering technological innovation as a starting

point for more age-friendly homes and the build-up of an 'innovation eco-system' with tech start-ups, larger companies, medical professionals and governments agencies that want to boost this form of economic activity, could be very compatible with the development of a certification scheme. Due to this shared agenda by a relatively powerful groups of stakeholders, the French Region SUD (PACA) might be a conducive environment to test the Homes4Life certification scheme. It became evident that within the SUD region, there is a longer history of setting up experimental home-like environment setting for medical professionals to conduct experiments that feature advanced technology. There is also a wider pallet of projects and initiatives to build up innovation ecosystems as a way to boost local high-value economic activity.

Compared to the other countries studied, the Netherlands features a high percentage of social housing and the overall quality of the housing stock is high. Certain building design requirements that were considered innovative in some of the other countries are standard practice. **In the Netherlands, there are many highly innovative experiments at an operational stage.** Some of these are not only new to the country, but new to the world. Consequently, a few of these experiments have been widely publicized in international media (for instance, the Hogeweyk dementia village and the Humanitas intergenerational project) and others are considered curious and interesting by non-Dutch interviewees (for instance Knarrenhof). Some interviewees (both Dutch and foreign) consider the Netherlands a frontrunner in terms of age-friendly housing innovation.

The interviewees in Poland argued that their country is not a frontrunner in terms of age-friendly housing provision and innovation compared to some other European countries. Many of the innovative activities mentioned by the interviewees were considered new to Poland, but not new to the world at large. In many cases the interviewees referred to activities in Germany that inspired them or at the difficulties to convince Polish companies that older adults present a growing and viable market for them. Nevertheless, our analysis indicates that **in Poland a range of innovative activities are currently gaining momentum, including new intergenerational housing projects and a general push for more apartments dedicated to seniors.** Furthermore, the unique Mimo Wiekui demonstrator apartment (a seemingly isolated initiative within the Polish age-friendly housing landscape) might be ranked amongst the best designed, high-quality and technologically advanced apartments that were observed during all fieldwork site visits and could be a good site to test the certification scheme.

To get back to the notion of differential 'readiness levels', it should be noted that a level implies a score or quantity rather than a process or direction. For an analysis of innovation activities, it is crucial to assess the process – or 'innovation journey' – and the direction – or 'innovation pathway'. It is beyond the scope of this report to provide an account of the innovation journeys for each of the experiments in the database (though for an example featuring the innovation journey of The Hogeweyk experiment, see Enninga 2018) so we the focus is on identifying innovation pathways. This analysis aimed to provide a synthesis of directions for future development towards which the innovative activities point, and to **categorize the innovation activities into a set of distinct innovation pathways.** The next section will provide an overview of these pathways.



## 5.2 Pathways and patterns

This variety of innovations tested in the experiments can be categorized into distinct innovation pathways. The following overarching innovation pathways can be identified:

(1) **Showcasing Technology:** These include many smart home pilots with a high degree of focus on technology. Most of these projects are clearly defined and tangible, but in some cases, the technology becomes such a central element that it becomes a solution looking for a problem rather than the other way around. In any event, the experiments that are part of this cluster shared the idea that better technology makes a better home. Often technology is showcased in a demonstration home rather than an actual home with a current permanent resident. Elements of housing, care and new consumer devices feature in these experiments. In some of these experiments the demonstration of smart products is more clearly emphasized (e.g. Mimo Wiek) and in others the care component is more dominant (e.g. The great Northern Haven, Belevingswoning Schoneveld)

(2) **Innovation Ecosystem:** Related to the Showcasing Technology pathway above, some of the demonstration homes are also part of a larger agenda to build a regional innovation eco-system around smart home or eldercare technology as their primary goal. In those projects, the demonstration home not really a home as such since there is no intention of it becoming permanently inhabited by people who can come to call it their place. Examples of experiments in this category include 27 Delvalle and Zorg Innovatie Huis (this is different from the Showcasing Technology pathway above because those apartments are intended to become permanently inhabited by people who will call it their home). Rather than demonstrating to older adults themselves what a future home environment might look like for them, these home-like environments demonstrate technological prowess to investors, healthcare professionals and (to a lesser extent) informal carers. In this case a building (which might or might not include a home-like demonstrator environment) assumes the role of physical hub to facilitate cooperation between regional stakeholders (such as technology companies, local start-ups, government agencies) and to generate interest amongst other stakeholders that might become enrolled with the eventual goal of strengthening the competitive economic position of the region based on the idea of older adults as a growing market

(3) **Sheltered Elite:** Also true to the idea that older adults constitute a lucrative market above, is the Sheltered Elite pathway. This includes building luxury, high-end sheltered homes designed for older adults who want (and can afford) to live independently with certain well-organized communal facilities and emergency care. It is important to note that this type of housing is not innovative as such, but the reason it is conceptualized here as an innovation pathway is because some of the projects mentioned by interviewees from Poland included these kinds of housing options when asked about innovative age-friendly housing experiments (e.g. Angel Care Centrum Signora in Wroclow, Osiedle Senioralne near Warsaw). Part of the reason for this might be that Poland has a relatively young population that is ageing at a very rapid rate and that still relatively few see this as a potential growth market that is worthy of investment. Apart from issues of growing

inequality and whether this would be a desirable pathway in the first place, there is another reason why Sheltered Elite is of interest from an innovation perspective. Compared to more mainstream housing environments, these elite spaces offer an alternative selection environment – or ‘protective space’ (Smith and Raven 2012) – for the development and testing of certain niche innovations. It also offers an alternative home environment to be included in piloting the H4L certification scheme.

(4) **Specific Community:** The Sheltered Elite pathway above caters specifically to relatively wealthy older adults, but there are many other examples of experiments directed at other specific sub-groups. Some of experiments feature so-called ‘intentional communities’, which are deliberately founded for members who hold a common social, political or religious vision and follow an alternative lifestyle. The most well-known of these are religious communities and eco-villages, but Maison Babayagas for older women with shared feminist principles would certainly also qualify. Interestingly, the international Foundation for Intentional Community views these kinds of collective homemaking arrangements as “pathways towards a more sustainable and just world” (<https://www.ic.org>), to which we might add that our focus highlights pathways towards an age-friendly world. Whilst specific communities’ highlights similarities amongst residents and the choice to live in a particular way, other interesting experiments highlight different social groups living together sometimes out of necessity rather than choice. Such projects aim to bridge the divides between these groups and deliberately address certain societal problems. A good example is the array of intergenerational housing experiments (a relatively large category in the database of experiments, and examples include Humanitas Deventer, Stalowa 29, Wólczańska 168 and many others)

(5) **Conscious Retrofitting:** Some of the intergenerational housing experiments mentioned above – as well as a larger part of the experiments in the database – are located in older buildings with heritage characteristics (e.g. Stalowa 29, Wólczańska 168). Especially buildings with a monument or heritage characteristics exemplifies the retrofitting challenges that are associated with making a building as age-friendly as possible on the one hand and retaining features of the original built environment on the other hand. This trade-off has to be made in a deliberate manner, conscious of which criteria are valued over others (hence Conscious Retrofitting). Considerations have to be made about how ‘deep’ the retrofit should be and to what extent features full accessibility (e.g. Botermarktpoort) or renewable energy generation (e.g. Rochestown House) will be taken into account. Finding creative solutions when confronted with an earlier design, choosing which features to retain and which to change presents a very different challenge than building new homes on a greenfield site. Therefore, pilot testing the H4L certification scheme should include both

(6) **Home Sharing:** Another interesting conceptually innovative solution that involves deep retrofitting is ‘home-sharing’. The idea of an older adult living alone renting out a spare room to a student is not new, but what is new is the way that this can now be organized and facilitated (at least that is how many interviewed stakeholders in Ireland perceived the ideas behind the Abhaile Project and associated activities by AVA housing). The idea is that a home is adapted to the future needs of its older resident and at the same time

create rental capacity within this home, which provides financial benefits and a sense of security and community for homeowner and a way to fund the age-friendly retrofit. This process could be outsourced to an intermediary who coordinates and arranges a builder for the physical retrofit, gains access to funding, and selects potential tenants. It might not be a coincidence that this has received more attention in Ireland because its severe housing crisis ideas about 'rightsizing' (i.e. downsizing) larger homes now inhabited by a single older adult are a point of focus and contention.

(7) **Retrovation Challenge:** A number of projects have as their main aim to achieve a paradigm shift by fundamentally challenging incumbent institutions and dominant ways of thinking. They argue for innovative alternative models that rehabilitate elements from the past in new way. A few new projects challenge the model of institutionalized care whereby older adults become patients instead of citizens (i.e. they are seen as patients dependent of care rather than individuals with their own values, opinions, needs and wants). In the view of these innovators this represents a loss of control and dignity. There is often an explicit agenda to counter stereotypes about older adults as frail and dependent. Some of these projects feature very innovative ideas about rehabilitating arrangements from the past, for example in terms of liveable neighbourhood design and good neighborhood. This recombination of older ideas in a new form that draw inspiration from an imagined past we could call 'retrovation'. Interestingly, many retrovation projects are also challengers and vice versa, therefore these project types have been classified together in name into this 'retrovation challenger' category of very innovative conceptual experiments (e.g. Knarrenhof and Oudenhuis)

Besides the pathways, the analysis of the databases of section 4 and the accounts by the interviewed innovators also yields a few other interesting general patterns.

First If the collection of experiments listed in the overview databases of section 4 is in any way representative for the entire array of promising new directions for the future development of age-friendly homes in Europe, then we can conclude that **most of the associated innovations are not primarily material or technical, but rather social or conceptual in character** (this is also what is suggested by most interviewed experts who have a good overview of the activities in specific countries or cities).

Second, it can be concluded that **age-friendly home experiments are geographically dispersed**. Many studies about the geography of innovation and experimentation suggest a particular clustering of innovation sites; often around science parks or vibrant larger cities that are home to the 'creative class' (Porter 1998; Breschi and Malerba 2001; Florida 2012). In contrast, if the locations of all the innovative experiments of the previous section would be pinpointed on map for each of the four countries, then a more dispersed pattern would be observed that includes booming cities as well as many peripheral towns and villages.

### 5.3 Implications for certification

This report has provided an overview of experimental age-friendly home environments that might be potentially eligible for a Homes4Life certificate when it is rolled out. In any event, some of these experiments might become sites to test the first version of the certification scheme. What can we say about the promising ways forward advanced through the experiments and what does this imply for the H4L certification scheme?

First of all, the overview of innovation pathways provides way to learn about what kind of innovative social and physical project designs a new certification scheme might be confronted with. This implies that **the certification scheme should be flexible enough to assess the variety of innovative home environments that are part of very different innovation pathways**. Ideally, the initial collection of pilot test sites in which the first version of the certification scheme will be tested, should ideally consider including at least one innovative housing arrangement from each of the described pathways.

Second, it should be noted that **there might be misalignments between traditional certification and the promising new directions advanced in the experiments**. Most of the associated innovations are not primarily material or technical, but rather social or conceptual in character. In other words, there are promising experiments with innovations that do not feature new technology, but new ways of organizing social processes or new conceptual housing categories that fill the void between traditional nursing homes and a conventional single household apartment. In practical terms, this implies that **the Homes4Life certification should rise to challenge in designing the certification that consider not only technical/material innovations but also social/conceptual innovations**. These social/conceptual innovations are related to, for instance, intergenerational housing or a dementia village and they are as at least equally important as technical/material innovations related to, for instance, new floor plan designs for buildings or the interlacing of homes with new kinds of sensors. Empowering these social/conceptual innovations might be difficult to achieve through a 'traditional' certification scheme for several reasons. First, because many traditional certification schemes – for instance energy labels or green building ratings in the world of construction and housing – emphasize features of the physical environment, rather than socio-cognitive or emotional elements. These schemes are more compatible with experimental sites that improve upon the technological and material features.

Second, many of the experiments that provide centre stage to technical/material innovations often feature an optimization of a more conventional type of home environment, whereas many of the experiments that provide centre stage to social/conceptual innovations depart more radically this and this makes it more difficult to certify through traditional measures. This is in line with existing innovation theory, which would argue that the first pioneering experiments with radically new ideas pre-date the emergence of standards and certificates, which become more important to add momentum to more established innovations at a later stage (Geels and Raven 2006; Sengers and Raven 2015). This implies that **certification might be more conducive for more mature innovation and experiments that are legitimized as part of a wider institutional**

**setting.** An indicator for this might be the number of intermediary organizations that provide coordination. In Ireland, for instance, there are many intermediary organisations that have to an extent developed a shared language and an empowering discourse to support age-friendly housing, which innovators can latch on to.

But what do the stakeholders involved in all of these experiments think about the usefulness, effects and internal dimensions of a certification scheme?

**Certification is not a primary concern for most stakeholders involved in age-friendly home experiments.** Most of the interviewed stakeholders did not express a clear opinion about the need, usefulness or promise of a new certification scheme for age-friendly housing. Only when explicitly asked, did they reflect on it and express an opinion. It should be noted that this is not evident, perhaps surprising even, since the first contact with the interviewees as well as the introductory part of each of the interviews was primarily about the main goal of creating a new certification scheme. One reason for this might be that, as stated above, that most of the innovations are not technical but social or conceptual in character and that certification is a less obvious concern here. Another reason for the initial lack of concern might be that most of the stakeholders involved in the experiments are more concerned with practical engagement and producing tangible outcomes on a specific location, rather than more abstract concerns that feel to them as overly procedural, complicated, indirect and far away. In other words, the idea of certification is not part of the lifeworld of most of these innovators. This implies that **communication about the certification scheme – its intentions, procedures, added value, tangible effects and who will pay for it – should be clearly and openly discussed with practical innovators.**

When mentioning the intellectual challenges of devising a certification scheme with innovators and other actors, it turned out that many stakeholders are to an extent interested in the idea. Perhaps because devising a certification scheme is not the first thing on the minds of most interviewees who want to advance the cause of age-friendly homes, did many of them express a sense of intellectual curiosity about the idea and the agenda behind it. Many seemed sympathetic to the Homes4Life consortium because they share a similar societal goal (new approaches toward better age-friendly homes) and were eager to talk to us about their innovations and experiments. The shared societal goal about empowering new approaches toward age-friendly homes and the idea of building a coalition around it can be leveraged in the communication with innovators. **Innovators might become more interested in the certification scheme if it is accompanied by a communication strategy that frames innovators as part of a broader movement of pioneers. The same communication strategy might position the certification scheme itself as a coalition-building device rather than a scorecard.**

Some interviewees expressed an interest for their experiment to become a test site for piloting the certification scheme. However, it was initially unclear to them what this would exactly mean, and this might result in a lack of commitment. **To secure commitments for pilot testing, the certification scheme on an experiment it is important to clarify with innovators what the added value of this exercise will be for their experiment.**



When asked about what would qualify as dimensions of an age-friendly home, interviewees often referred to **dimensions of accessibility, safety and location were often mentioned by innovators**. Many pointed at classic criteria about accessibility in the home and the surrounding environment; several times the importance of security or safety were brought to the attention – not only actual safety, but also perceived safety; and crucial importance of location was mentioned – proximity of amenities, vibrant and green specifically (this it is unclear how these location variables would feature exactly in an actual certification scheme for age-friendly homes). The **importance of architectural innovation** was mentioned by some interviewees. For instance, one interviewee in Ireland talked at length about his apartment building design as featuring not only new material and technological adaptations, but also about the adaptations to foster social interaction and foster a sense of local identity “architecture in its purest form”. Perhaps next to the worlds of smart technology, healthcare and construction as a source of inspiration, the world of creative architecture could offer inspiration one how to account for these ‘softer’ elements of an age-friendly home.

Overall, **stakeholders voiced mixed views about the usefulness and effects of a certification scheme for age-friendly housing**. By far the most common response was not opposed to certification, but also not convinced that the development of a certification scheme is necessarily the best way forward for their innovations and experiments. Although for some of the interviewees a new certification scheme is clearly the way forward. For instance, an interviewee involved in several experiments in Poland argued that “the idea of certification is so great, and it is very much what is needed. I can see it from both local governments’ and a developer’s perspective”. Others voiced concern at the idea of certification when applied to their experiment. For instance, one interviewee involved in an intergenerational retrofit experiment argued that “... lots of effort was put in this project, but it is not perfect. A low score for a certificate would be demoralizing” and concluded that a certification scheme would privilege greenfield sites and new buildings. This implies that **the limitations faced by retrofit and regeneration projects should be considered for the development of the certification scheme**.



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## 7 Annexes

### 7.1 Annex 1: Interview Protocol

#### 1: Pilot project (local niche)

##### 1.1 Origin story

- Start (how and when did the project start?)
- Milestones (what and were key milestones so far?)
- Challenges (what were key challenges along the way?)

##### 1.2 Vision

- Description (what is the main idea or societal challenge addressed?)
- Cognitive shift (does this require a relevant stake to change their mind?)
- Shared (do other actors involved think along similar lines?)

##### 1.3 Network

- Description (which stakeholders are involved and in what role?)
- Broad (who is missing?)
- Deep (what kind of resources can this network mobilize?)

##### 1.4 Learning

- Technical (which lessons about the product?)
- Social (which lessons about the other actors involved?)
- Reflexive (which lessons fundamentally challenged assumptions?)

##### 1.5 Other innovations

- Identification (which other relevant innovative projects are you aware of?)
- Representation (do they represent a similar direction / pathway / future?)

#### 2: Scaling & support structures (global niche & regimes)

##### 2.1 Upscaling

- Desirability (pilot represents a desirable future for age-friendly housing?)
- Replication (pilot direct - has the pilot been replicated elsewhere?)  
(which barriers are faced?)



- Expansion (pilot direct - pilot grown in size, number, applic domain?)  
(which barriers faced?)
- Institutionalization (pilot indirect - has the idea within the pilot mainstreamed?)  
(have the pilot achieved changes in policy?)  
(which barriers faced?)
- Circulation (pilot indirect – has relevant knowledge travelled and how?)  
(which barriers faced?)

## 2.2 Support structures

- Certification (Is it promising?)  
(Dimensions age-friendly house?)  
(How could it help your efforts?)
- Policy & reg (Which regulations form a barrier and should change?)  
(How can policy best support you? Subsidy? At which level?)

## 2.3 Regimes

- Multi-regime (Housing, healthcare and ICT – which logic dominates?)  
(How do the other systems play a role / come together?)
- Tensions (Are there clear tensions between these systems here?)
- Opportunities (Institutional entrepreneur: which of system rules?)  
(Which rules to follow, which to challenge?)