

## R1A2 - Questionnaire Evaluation Transnational Report

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## REVISION HISTORY

Version	Date	Author	Description	Action	Pages
[..]	DD/MM/YYYY	PARTNER ORGANIZATION	[Creation/Insert/ Delete/Update of the document]	[C/I/D/U]	[No. of pages]
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(\* ) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

## REFERENCED DOCUMENTS

ID	Reference	Title
1	2021-1-DE02-KA220-ADU-000033587	SmartHome4SENIORS Proposal
2		

## APPLICABLE DOCUMENTS

ID	Reference	Title
1		
2		

## Table of Contents

Introduction

I. Summary of questionnaire results

II. Sociodemographic data + ICT skills

A. Sociodemographic data

B. ICT skills

III. Interest in smart homes

A. Benefits and values of smart homes

B. Use and/or lack of use of smart home devices

IV. Interest in DIY and intergenerational cooperation

A. Interest and understanding of DIY

B. Interest on intergenerational cooperation

## Introduction

The SmartHome4Seniors project consortium conducted a survey of over 100 people following a research phase initiated at the beginning of the project. The aim of the survey was to verify the ideas that emerged from the research phase and to test some of the assumptions made in the field of smart homes, DIY and intergenerational learning. As the target group is senior citizens, the respondents to this questionnaire are all over 50 years old. They are the target group of this research phase and of the whole project.

Each partner conducted this research phase in their own country and reported on the results with an initial analysis.

The partner countries and their reports are as follows:

- [France](#)
- [Germany](#)
- [Ireland](#)
- [Greece](#)
- [Austria](#)
- [Netherland](#)
- [Bulgaria](#)

## I. Summary of questionnaire results

All partners collected 20 responses to their questionnaires with the exception of the German project coordinator, ILI, which collected 48 responses.

The survey was distributed differently among the partners. There were no instructions to this effect, each partner was free to carry it out in the way they wished.

Thus, the responses were collected mainly in two different ways:

- At a distance from existing networks of people and different organisations for 4 partners (DCU, ESE, ATERMON, ILI). Contact was mainly made by e-mail with these existing networks
- 3 partners (AKNOW, KOMICHA, DIE BERATER) were contacted by the team members' relatives and by contacts brought by the trainers working in their teams.

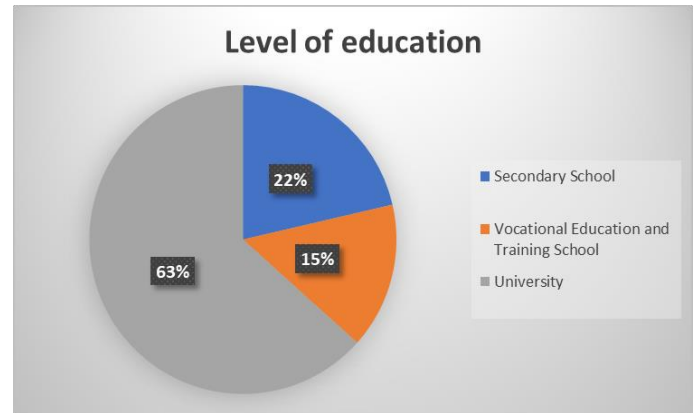
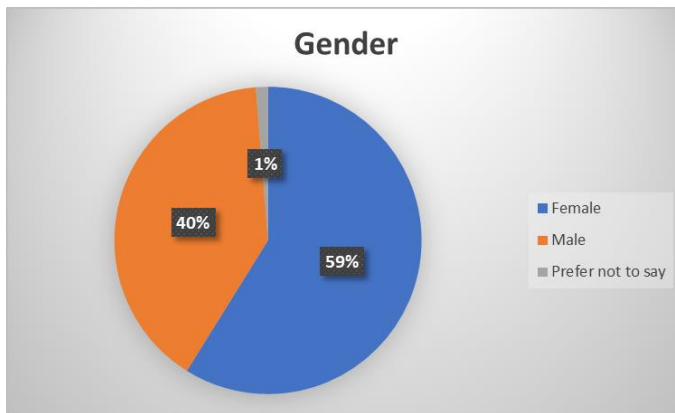
The participants were generally satisfied and several organisations have already received e-mails from seniors interested in more information on the subject. However, it was noted that these topics are not well known to the senior citizens interviewed, as will be shown in the following sections.

## II. Sociodemographic data & ICT skills

*In this section, we are trying to better understand the reality of the seniors the project is aiming at by collecting sociodemographic data and by evaluating their ICT skills.*

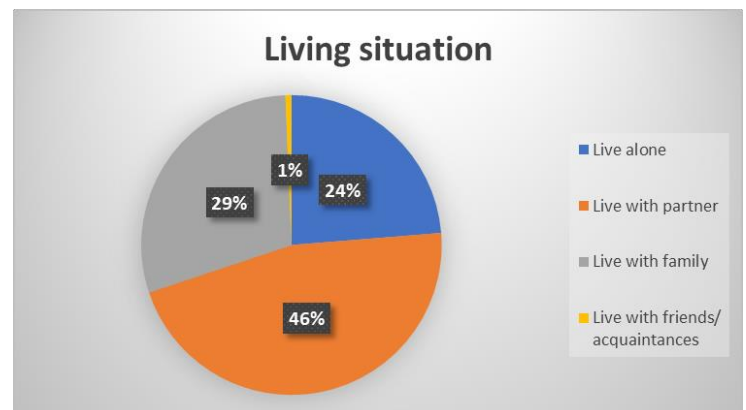
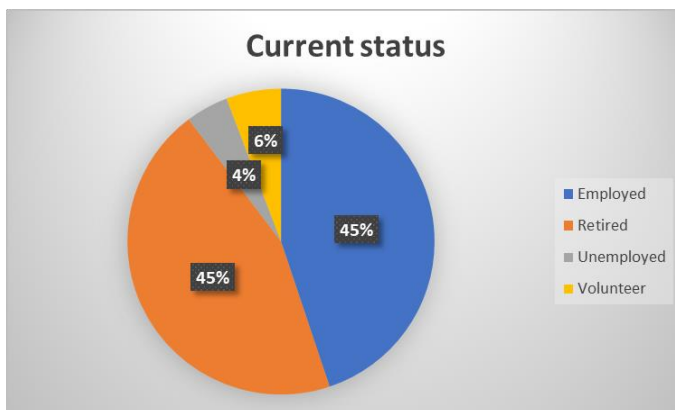
### A. Sociodemographic data

*What is the sociodemographic data of the people you surveyed? Are the seniors surveyed active? Are there any conclusions you can draw from those data?*



When the data from all the partners are put together, it can be seen that the majority of the senior citizens interviewed are females. Experiences show that women are more likely to help out by answering questionnaires, for example, or to invest time in managing the house, to plan time for future furnishings and to think about savings.

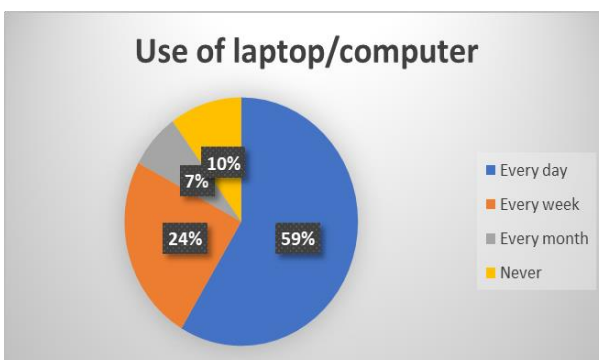
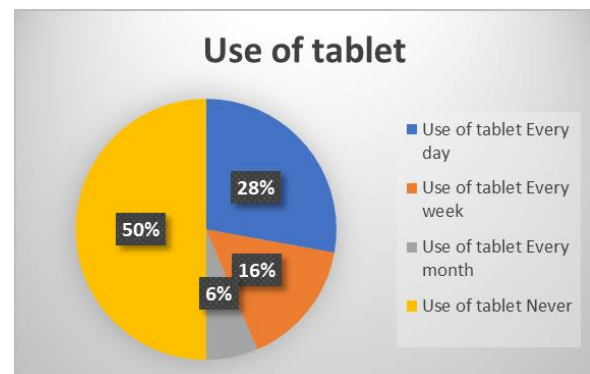
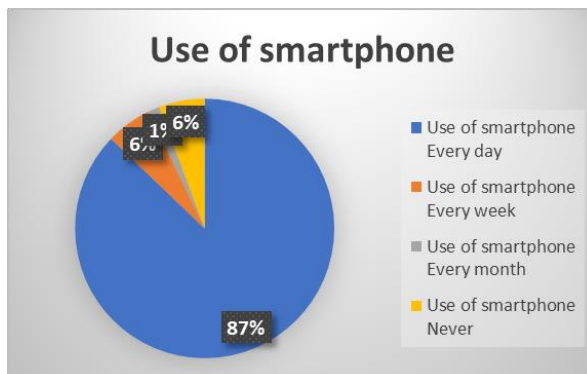
The level of education is rather high, higher than the national averages. This can be explained by the networks that the organisations deal with on a daily basis and solicit for this type of survey.



It can also be seen that only 45% of the senior citizens surveyed still have a paid job. The majority of them are therefore retired and without occupation. It is possible to assume that these people might be more inclined to spend time on learning, for example to learn new skills. Finally, it can be seen that 25% of the respondents live alone, 46% live with a partner. This implies that for 71% of the respondents, the household is composed of one or two persons considered as senior, elderly. The SmartHome4Seniors project is specifically aimed at this type of person. The project aims to promote techniques that allow seniors to remain independent in their own homes for as long as possible in complete safety. This project is therefore of real interest to those seniors living alone or in pairs, who are highly represented in the senior population.

## B. ICT skills among the surveyed seniors

*What are the ICT skills of the seniors who have been surveyed? Would you consider that they had enough ICT skills to understand the subject or that their ICT skills are generally lacking?.*



In terms of technological tools, 87% of seniors use a smartphone every day, 59% use a computer every day, while 50% have never used a tablet.

Although there is no real need to develop content specifically adapted to tablets, it can be noted that smartphones and computers are very widespread among the senior population. Although it can be considered that seniors are likely to be digitally behind, they do have basic skills and the right equipment.

### III. Interest in smart homes

*Based on the answers to the questionnaire, you can try to deduce the real interest of smart home solutions for seniors. First by understanding what value and benefits it can have for them and then by understanding their needs in terms of smart home devices.*

#### A. Benefits and values of smart homes

*What are the benefits, values and fears attached to smart home devices for the seniors who responded to the questionnaire? Do the respondents have interest in smart home devices? What devices do they use and how often? Do they need support setting up the smart home devices? Is there any connection between smart home devices and independent living for the seniors surveyed?*

In the questionnaires, respondents were asked what they considered to be a smart home. There was a wide variety of responses, but it is possible to identify similar themes in all the countries where the survey was carried out:

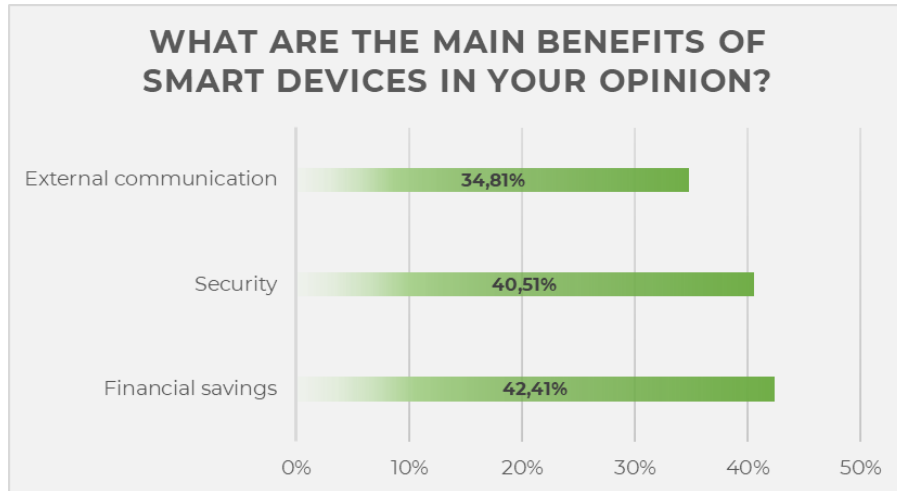
- Connected house at distance
- A house making the life easier
- A house with electronic devices and sensors
- A house with maintenance and repair opportunities.

Respondents knew how to answer this question in a general way. They are able to identify what a Smart Home is and the first opportunities, known to the general public, that it offers, i.e. the digitalisation of a large part of the functioning of the home. But they don't go into too much detail. They mainly talk about synonyms, the fact that it makes life easier or the fact that it is a house equipped with sensors. This shows a vague knowledge of the subject from our respondents, but without going into detail. However, this is not yet indicative of an interest on their part.

In order to begin to understand their knowledge in more detail, their interests and possible expectations of the Smart Home, we asked the respondents about their ideal connected home scenario.

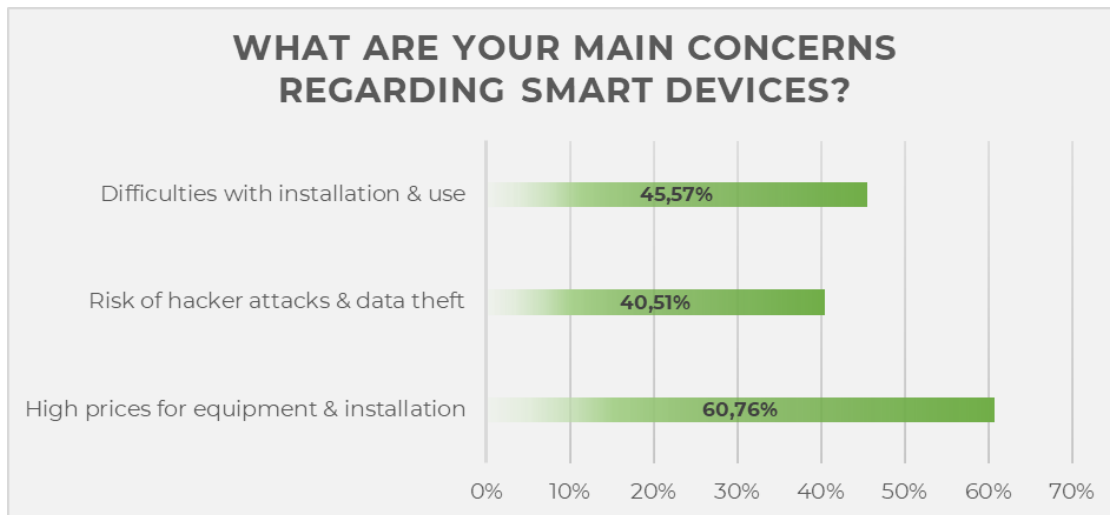
The answers that were most frequently found concerned the following topics:

- Lights control and doorbell
- Energy consumption
- Comfort



The expectations of the seniors interviewed are in line with their knowledge. Quite basic. We note in particular that their main concerns are financial savings (42.41%) and security (40.51%), even before security possibilities (34.81%). There seems to be a real interest in informing them about the possibilities offered by Smart Homes.

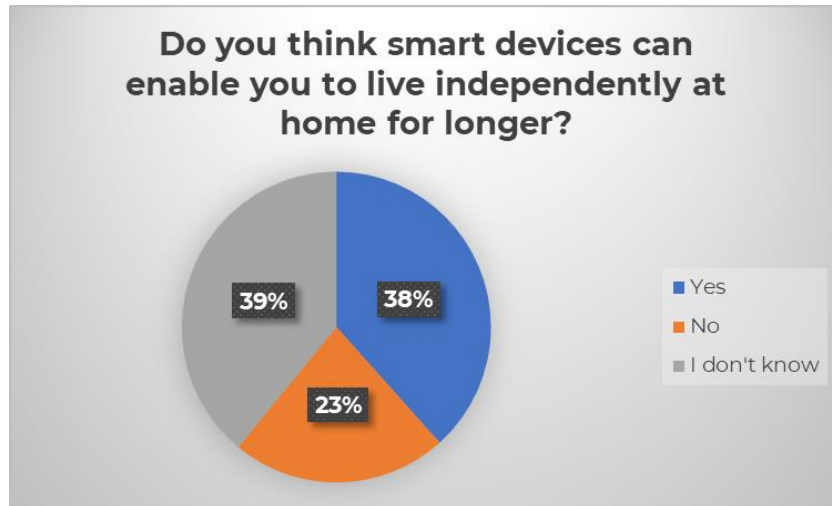
It is also interesting to know the reasons why seniors are not interested in Smart Homes or do not decide to install them. We can see that for more than 60% of the respondents, the high price and the installation are an important obstacle. 40.51% of them are worried about the risks of hacking and 45.57% by the difficulties of installation and use. These are therefore concerns for almost half of the respondents.



Apart from the potential ignorance of the subject, or the knowledge of the global subject only, we notice that almost half of the respondents (or almost, depending on the answer) have concerns about Smart Homes that could prevent them from installing them or simply from being interested in them. These three subjects are therefore subjects on which it is necessary to reassure the seniors.



The research phase showed us that senior citizens were probably not familiar with Smart Homes issues. That is why the questionnaire was designed to give them something to think about. In particular the question of staying at home longer:



Without surprise following the research phase and the first answers of the questionnaire, only 38% of the seniors are aware that the Smart Homes tools can allow them to remain independent at home for a longer period of time in complete safety. Yet this is one of the central points of the project and we note that less than half of the seniors think that there is an opportunity to live longer at home. It is therefore a real challenge to inform them about these possibilities.

We asked the seniors why they think it is a good opportunity or not. Their positive answers are related to health issues and simplification of daily life. The negative answers generally consider that it is human assistance that the seniors need as well as human presence to face loneliness. They consider that we are replacing the human being by the machine in a certain way, that perhaps one prevents the other.

Do you think smart devices can help you stay independent longer at home?	Answer	Purpose
By monitoring one's physical integrity and automatically alerting in case of a detected problem	Yes	Health reasons
For the elderly		
some features avoid physical movement		
I live alone and it makes me feel safer at home		
Yes, because some actions that cannot be taken because of age can be done alone. + Emergency contacts...		
To quickly warn someone in case of a problem		
With means to check good health. Like the fall detector as you say above		
Because we are watched over and this reassures our children		
they make life easier really		
It must be to simplify our lives, and to take some of the work out of it. I think it can also help us to take better care of ourselves.		
This will allow me to be less tired and to concentrate on more important things.		
It is the human support that is essential it's more adapted to degenerative diseases	No	
With age and loneliness it is never good to live alone at home		
I'm not sure that the few devices currently in place in the house have anything to do with my potential future independence (e.g. controlling speakers from my phone, closing shutters, etc.)		
N/A	I don't know	
I don't know how to answer		
I don't know		
n/a		

These first results on the subject of Smart Homes specifically show that senior citizens know very little about the subject and the possibilities offered by Smart Homes. At first sight, they do not seem to be very interested because they are wary of this world that they do not know. There is therefore a real need to inform them about the subject.

## B. Use and/or lack of use of smart home devices

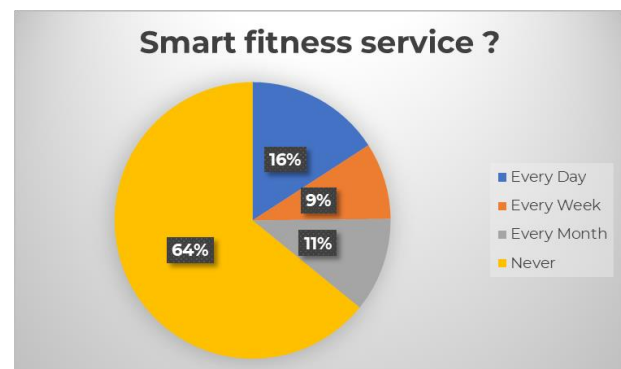
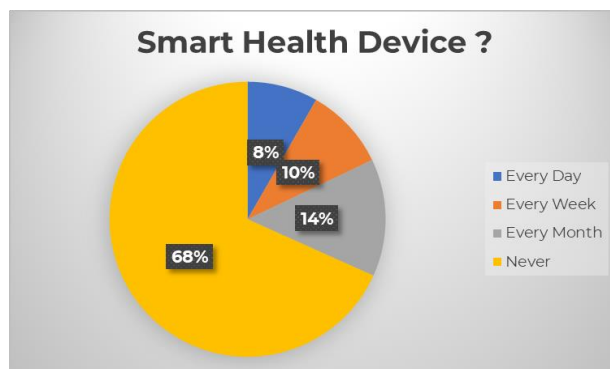
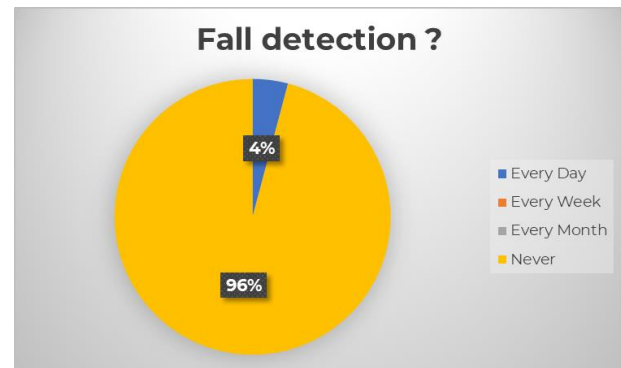
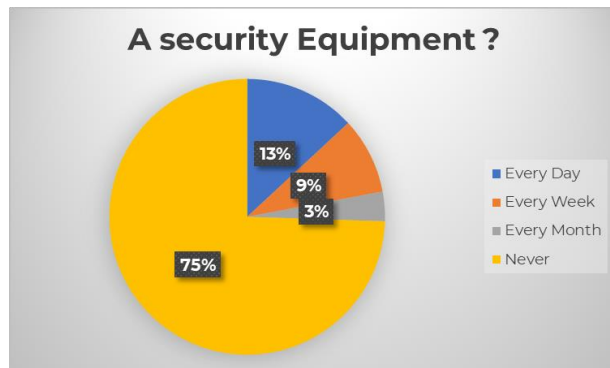
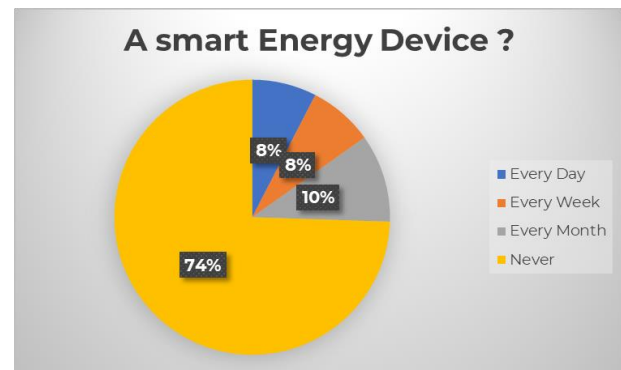
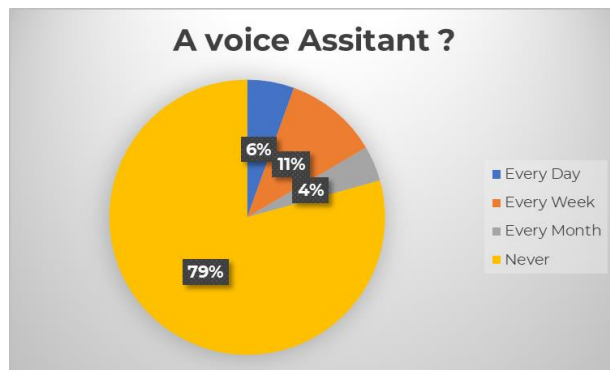
*How widespread are smart homes devices among the persons surveyed? Which devices are the most common and how regularly do seniors use the devices? What could be the explanation for both the use and lack of use of the smart home devices?*

We also wanted to understand whether the seniors interviewed used smart home tools or connected objects in general. We mentioned the following devices:

- Virtual voice assistant
- Smart energy devices

- Smart security equipment
- Fall detection
- Smart health devices
- Smart fitness devices

We asked about the frequency of use (daily, weekly, monthly, never) theme by theme:



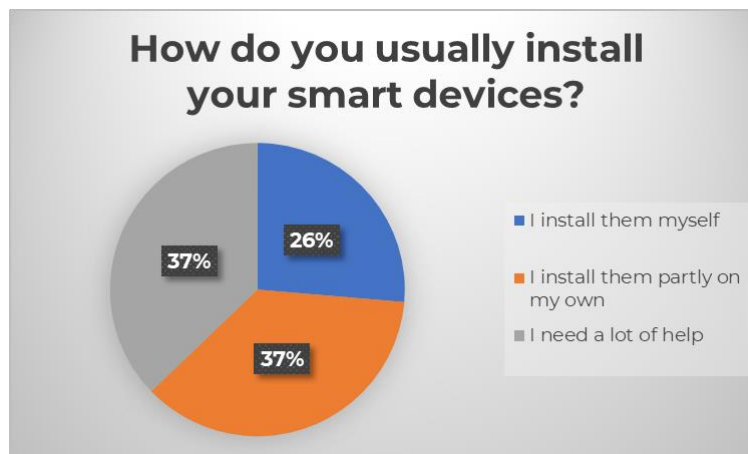
Among all the topics mentioned, we can see that the majority of senior citizens never use any of the tools mentioned:

- Virtual voice assistant : 79% Never
- Smart energy devices : 74% Never
- Smart security equipment: 75% Never
- Fall detection: 96% Never
- Smart health devices: 68% Never
- Smart fitness devices: 64% Never

It is worth noting that 16% use a smart fitness device every day and 13% use smart security equipment every day. These are the highest figures for daily use.

In line with the lack of information on the subject, it should be noted that there is very little use of all connected objects, whatever the subject, among seniors.

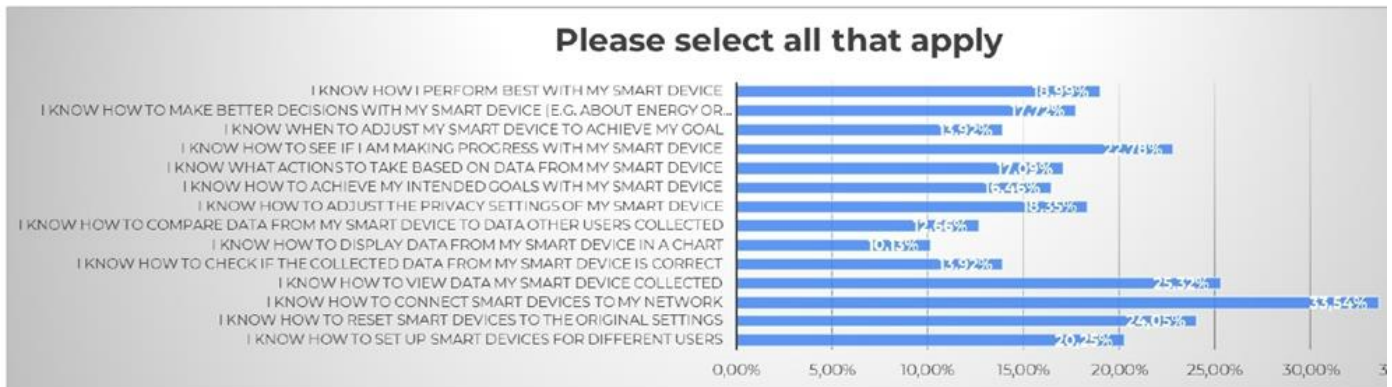
Among the obstacles noted in the previous section, we recall that 45.57% of the seniors (**figure n°X**) consider the difficulty of installation and use as a barrier to Smart Homes. We therefore wanted to know what support they needed:



Thus, only 26% of them install them themselves, independently. The most common supports are professionals on the one hand and the family on the other.

<b>If you need support, please explain the type of support you need</b>	
my family sometimes helps me	Support from the family
Grandchildren, family	
I often need further explanation on how to use it.	
technician	Support from professionals
Installation support and an initial explanation of features and use	
installation, updating, use	
From people who know about it	
I don't install it	No support

In the same way, we notice that very few seniors have more or less technical skills in the field of IoT. Senior citizens do not consider themselves particularly able to perform the actions listed below. The highest value is "I know how to connect smart devices to my network" and concerns 33,54% of respondents. This is reflected in the results of the previous questions but not necessarily in the results for the level of ICT skills, which seemed to be relatively high. Once again, we understand that the field of connected objects seems far away for these people who see it as too complicated for them.



## IV. Interest in DIY and intergenerational cooperation

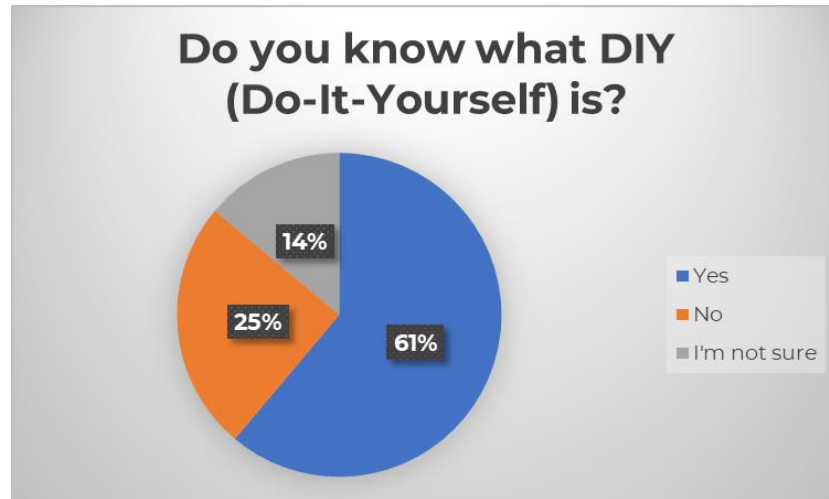
*A big aspect of our project is also the approach with kits and DIY. It is important to find out what our target group understands of the concept of DIY and how this approach is interesting to them, especially in relation to smart devices. Intergenerational cooperation is also an important part of the project and it is necessary to investigate whether it is viewed positively or not by seniors.*

### A. Interest and understanding of DIY

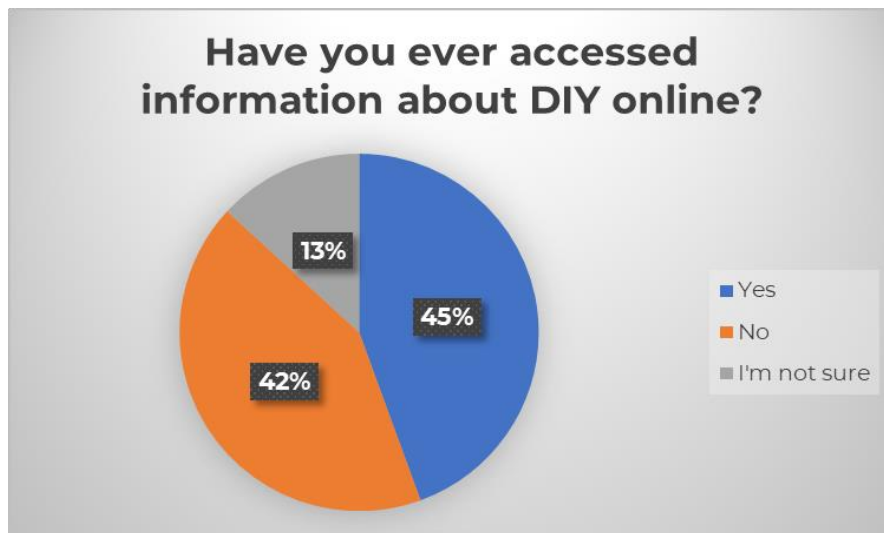
*To what extent does the target group understand the concept of DIY? Do they feel it is something that can benefit them? Are they using DIY related to smart devices?*

A big aspect of the project is also the approach with kits and DIY. It is important to find out what the target group understands of the concept of DIY and how this approach is interesting to them, especially in relation to smart devices.

With the right language translations, it is possible to assume that senior citizens are familiar with DIY. Initially far from digital, it is a relatively common practice in Europe, in its non-digital format at least.



It can be seen that 61% of the seniors surveyed know about DIY at first sight. If the answer "I'm not sure" is taken into account, only 25% of the seniors do not know what DIY is. This figure still seems high, but it is far from the answers to all previous questions. So there is a slight improvement when you start to move away from the digital topic.





In the same spirit, 45% of them have already done research on the subject online. We also see that 65% of the seniors have already done DIY in their homes. This figure is relatively close to that of the seniors who know what a DIY is, even if it is a bit higher.

The questionnaire asked them to give examples of homemade DIY. There are many different types of response. First of all, there are kit assemblies, such as those found in furniture sales companies, or the construction of objects from a raw material, wood for example. There are also many repairs, electronic or otherwise, as well as maintenance, sewing and the creation of decoration or gardening.

DIY therefore seems to be relatively widespread among the seniors, most of whom have already had the opportunity to practice it, mainly in non-digital form.

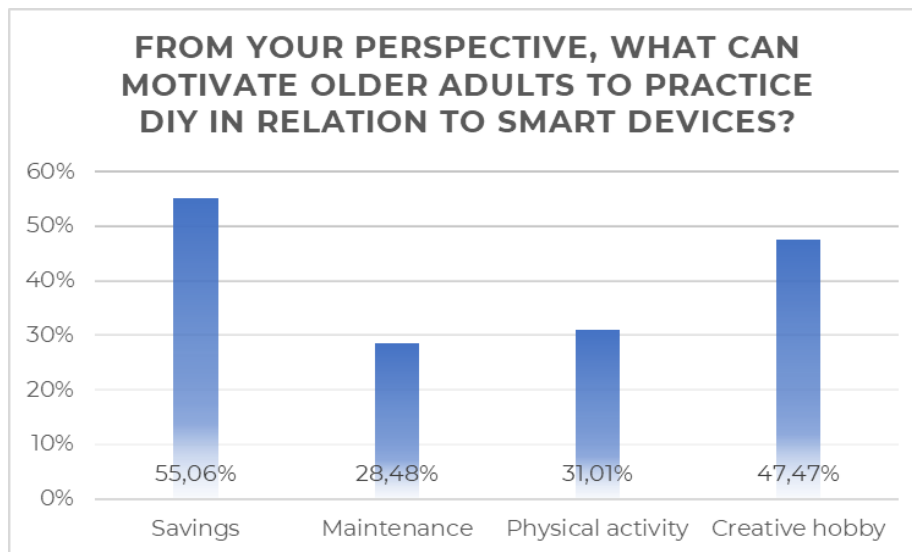
Description of DIY activities	Theme
<ul style="list-style-type: none"> <li>- how to fix small things at home</li> <li>- repairs</li> <li>- small repairs</li> </ul>	General repairs
<ul style="list-style-type: none"> <li>- recharging a car battery</li> <li>- machine repairs</li> <li>- repairing electronic installations</li> <li>- For example, repairing computers. I changed the graphics card and harrdisk at that time.</li> <li>- To repair technical devices like computer, washing machine, cell phone</li> </ul>	Mechanics/electronics repairs
<ul style="list-style-type: none"> <li>- DIY work at home (building small furniture)</li> <li>- building shelves</li> <li>- In terms of repairing furniture</li> <li>- IKEA-style furniture setup</li> <li>- Homemade lamp</li> <li>- many small repairs, e.g. building and installing furniture, electrical, bicycle repair, washing machine clogged - cleaning the water inlet hose and replacing the seal</li> <li>- children's games and toys</li> </ul>	Furniture maintenance and building
<ul style="list-style-type: none"> <li>- Sewing</li> </ul>	Sewing

- made little handbags like this for my daughters - I don't know if this fits, but I reused old clothes or created my own home remedies. I have seen and copied it via YouTube.	
- insect traps - building flower pots	Gardening
- I have done painting (at home) - melting pots, decoration - Hanging pictures - gardening - making decorations	Creating house decor

It is therefore encouraging to see that DIY is rather welcome among the senior population. However, these DIY activities are mainly focused on construction, decoration or repair of non-digital equipment. We therefore asked the respondents what might motivate seniors to practice DIY in relation to smart devices.

Their answers were first of all about financial savings (55.06%), which is relatively close to the expectations of Smart Homes in general, at 42.41% (figure n°X) Being able to enjoy a creative hobby comes in second place at 47.47%, while maintenance and physical activity are of interest to only 28.48% and 31.01% of seniors respectively.

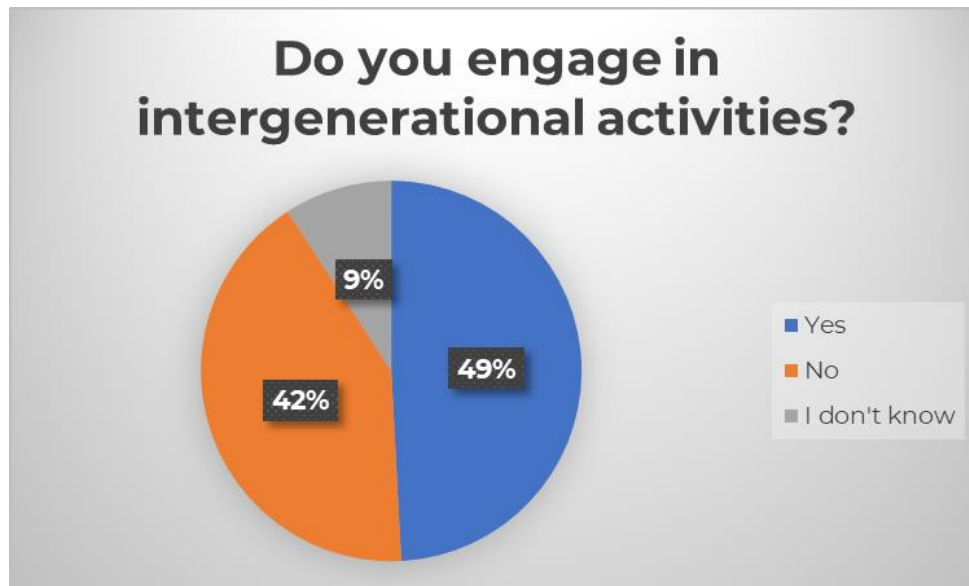
We can therefore identify two priorities, two interests in the approach of senior citizens to digital (and non-digital as well) DIY: financial savings and the possibility of being creative.



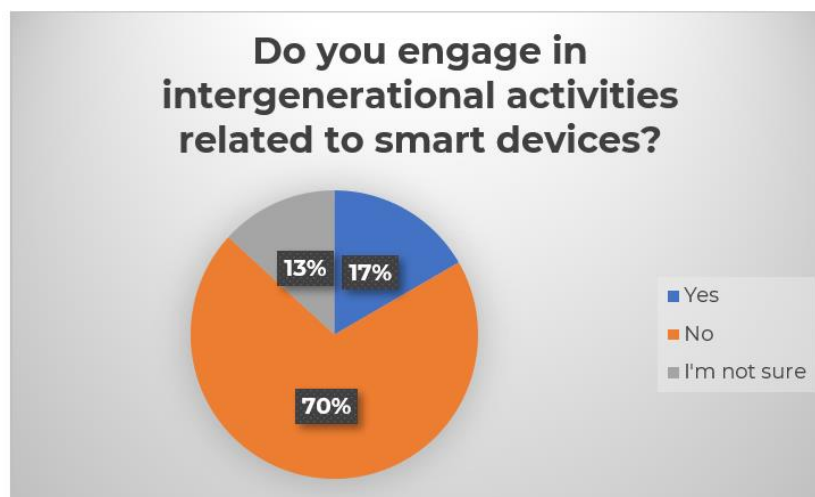
## B. Interest on intergenerational cooperation

*Did all the surveyed persons understand the meaning of intergenerational cooperation?  
Do the respondents view intergenerational cooperation positively or negatively? Are they involved in any kind of intergenerational cooperation activities?*

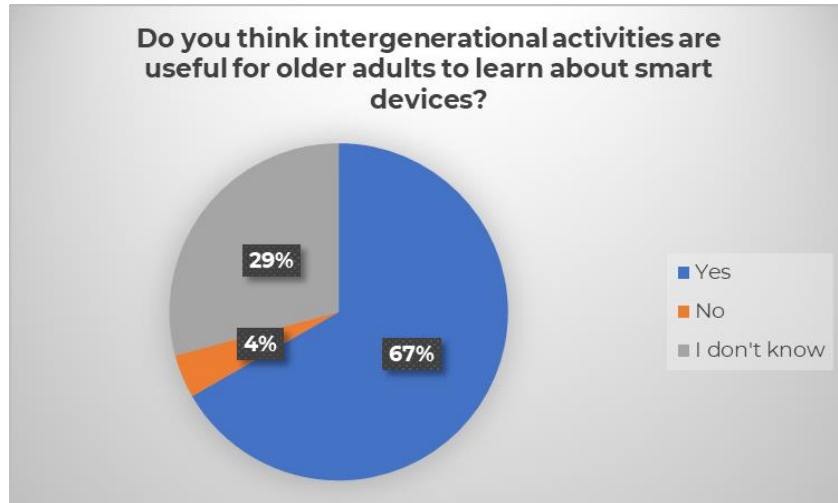




Half of the seniors surveyed (49%) are involved in intergenerational activities. Although this figure represents half of them, which is not negligible, it remains relatively low as it is likely to imply situations of social isolation among seniors. In Europe, 7% of seniors feel lonely (data from “Petits Frères des Pauvres”).



As expected, the figures for intergenerational activities on the subject of smart devices are even lower. Only 17% of the seniors are engaged in such activities. The seniors are nevertheless of the opinion that such activities would be useful for the elderly to learn about smart devices. 67% are of this opinion.



If DIY is not very common among the senior population, even less so in the digital field, the question of activities is encouraging. Indeed, following an intergenerational learning approach seems to be little known but rather welcome among seniors.