TELEGRAFIK

Ageing well in Retirement Homes and at Home

Which innovative technologies for what added value?

summary

Introduction

The ageing French population is becoming a major concern and the number of dependent people will double by 2025.
It was in this context that the new Dependency Law was introduced in autumn 2019, around the three priorities highlighted in the Libault report on old age: the quality of care for the elderly, decreasing the cost of institutional care for families, and the revaluation of the professions in the elderly care sector.
This study has been compiled with this in mind. Its objective is to summarise and share the results obtained by the trials and the use of technological solutions aiming to reduce the loss of independence and promote the support of elderly people at home, presenting these results in terms that everyone can understand.
For Telegrafik, the objective behind this study is : **to provide useful and innovative solutions that are accessible to as many people as possible, capable of adding to the human assistance provided on a daily basis to fragile people.**
Indeed, there are numerous actors involved in caring for frail elderly people: partners, families, friends, neighbours, care and support staff, health professionals, medical-social professionals, various service providers. The proper management of ageing must involve increased coordination between these actors, who need to be better informed, share information, interact, work with and around each other, transfer files. And who must, in case of emergency, be able to intervene and act. **Technology is at the service of this**.

The question we have tried to answer is as follows :

"How can we better support the elderly as they age, along with their families and professionals, with innovative solutions?"

How can the quality of life of elderly people be improved, when we are faced with a small increase in the number of years of life spent living in good health compared with bigger increases in life expectancy ?

Insofar as dependency is difficult to reverse, how can we best promote the preservation of independence?

In this study, we will therefore endeavour to share concrete feedback, based on first-hand experience, on the provision of connected solutions for **ageing well**.

1 The evolution of innovative solutions for ageing well

Preventing falls : a fundamental issue

For many years, the technical solutions proposed for ageing well have mainly covered detecting falls.

Indeed, according to Public Health France[1], over 9,300 people aged 65 and over die each year as a result of a fall. 76,000 people are hospitalised each year for hip fractures, and a person over 65 falls on average 3 times a year.

However, any fall that is dealt with too long afterwards can have serious consequences, be it from a physical, psychological or financial point of view.

Sudden, soft, there are so many adjectives to talk about falls in the elderly. Depending on whether the person slips, falls suddenly, slides against a wall or grabs onto a chair before falling down.

Here are some figures that show the need to prevent these falls :

The leading cause of death in the elderly

20% require hospitalisation

9% cause fractures (mainly in the femoral neck)

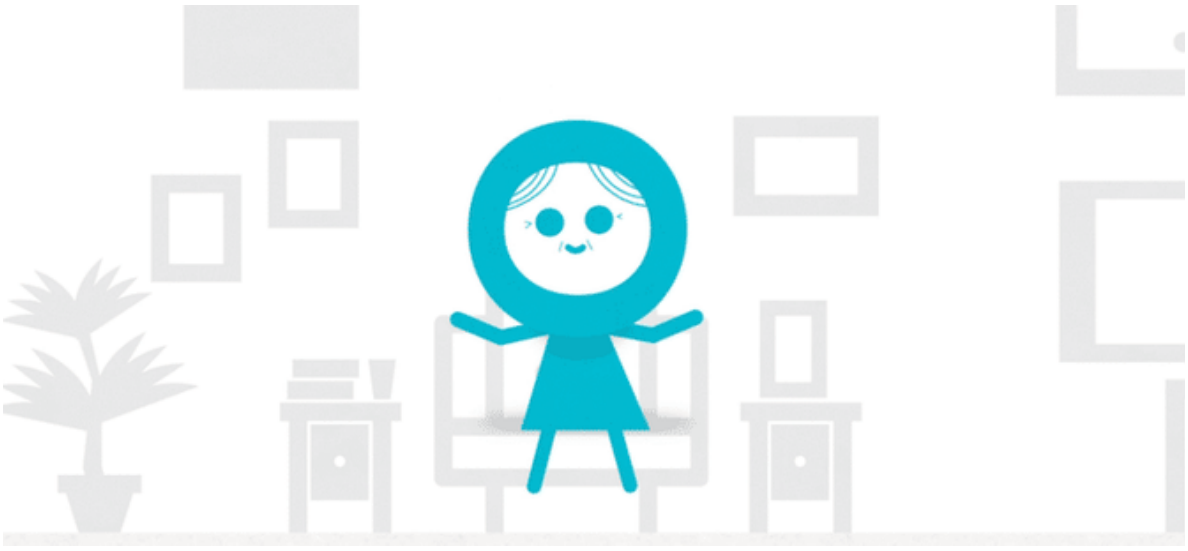
40% of elderly people are referred to specialist institutions after a fall

Over the last 6 years, with the launch of the Silver Economy sector in France, the reflections and work of actors in this ecosystem have enabled it to address solutions to other problems besides falls, and it is becoming increasingly common to use solutions that make it possible :

- **to inform** caregivers who want to know what is happening, be alerted in case of problems, and coordinate services around their parent.
- to provide **more security.** Indeed, less than half of the people affected agree to take out a subscription to a remote assistance service with a medical emergency medallion. And only 7% of people are able to press the medallion when they have a subscription and they have had a fall.
- to provide more of a **social link**, e.g. via photo sharing, a connected screen or TV;

More importantly, innovations are now committed to offering prevention solutions, as well as 360° state-of-the-art services, adapting to people's needs over time and their possible weakening or loss of independence.

Thus, the ambition of the Silver Economy ecosystem, of which Telegrafik is a part, **is to enable people to grow old in good health, happy and surrounded by friends and relatives, while anticipating or preventing falls or deterioration in their state of health.**
It is a question of taking care of people in a comprehensive way, and ensuring their safety, managing their illnesses, but also their physical and intellectual stimulation as well as their comfort.
No matter where they live: at home, in a retirement complex, or in a nursing home.



2 The characteristics of the study

Scope

This study is based on feedback from **340 beneficiaries**, living at home, in a retirement home or in a nursing home. This sample is statistically representative of a thousand innovative solutions that were set up in **2016, 2017 and 2018**.

Profiles of equipped elderly beneficiaries

Beneficiaries who have been equipped with the solutions have included:

People refusing to wear the call button and in need of being rescued in the event of a fall or discomfort.

People with cognitive disorders

A person suffering from a cognitive disorder or beginning to develop Alzheimer's disease will often forget to wear the call button or even use it after a fall or if they are experiencing discomfort.

people for whom relatives wanted complete security and who want to receive information about them via their phone.

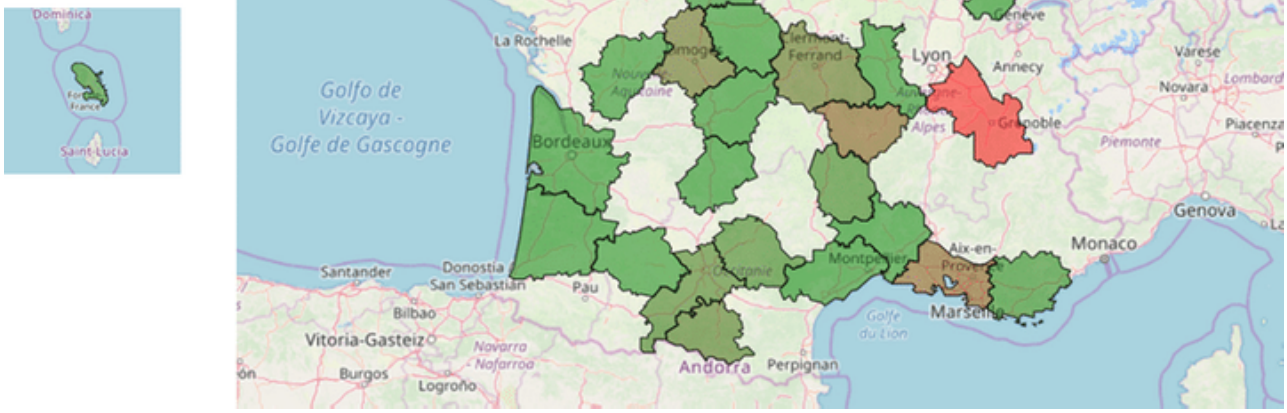
People returning from hospital who need to return to their home and gradually regain their independence.

Disabled people, for certain types of disability.

Geographical distribution of beneficiaries

The study focused on a sub-sample of beneficiaries of Telegrafik solutions, who were spread out in **June 2019** across France as follows :

Telegrafik solutions present in 40 departments :

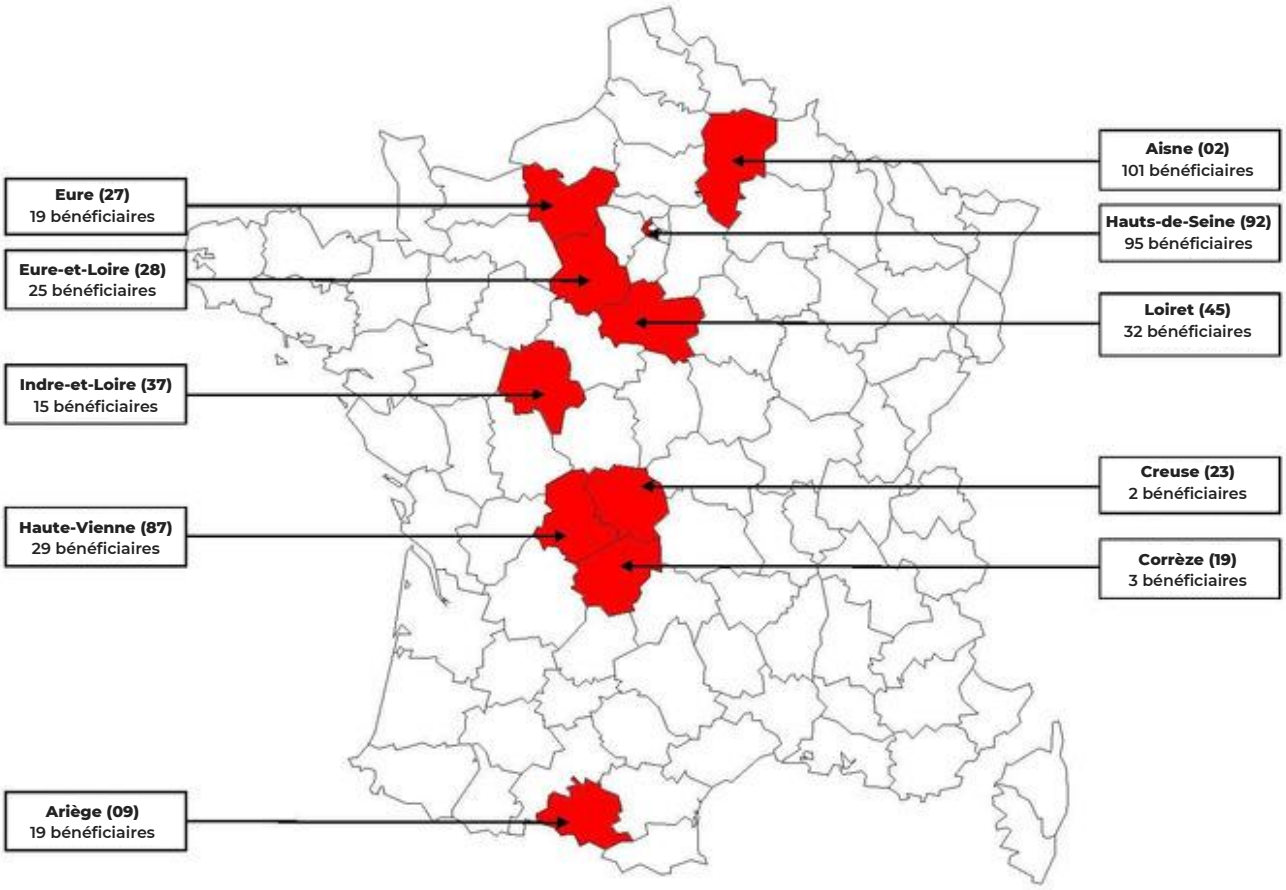


Green : At least one beneficiary in the department.
Red : Densest areas in terms of equipment.

Source : *Telegrafik*

The study sample itself covers **10 French departments**, with a large variety of locations and situations: rural areas, urban areas, families with higher and lower incomes, and more or less fragmented.

The map below shows the departments where these beneficiaries live and their distribution by department :

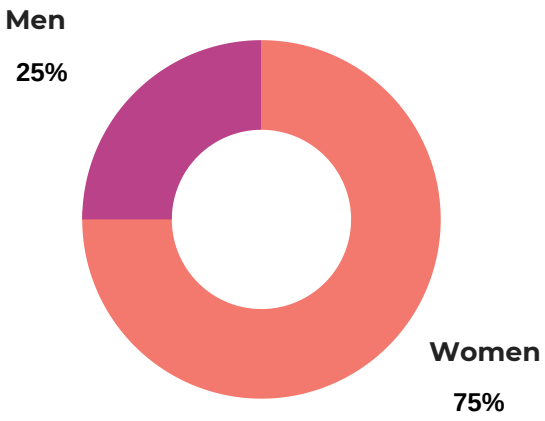


Source : *Telegrafik Projects*

Characteristics of beneficiaries

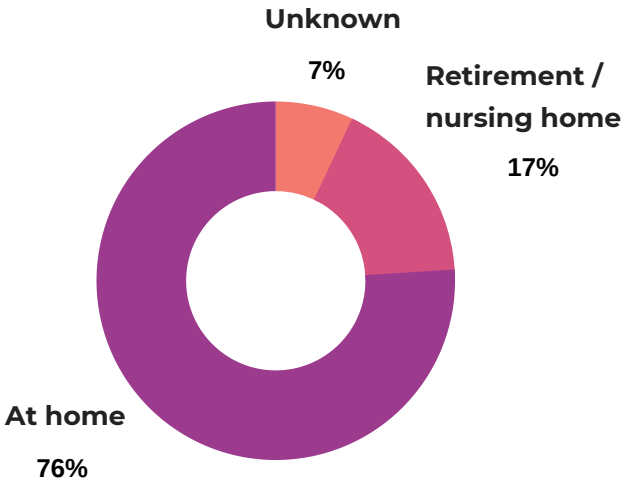
Sex

The beneficiaries of the service are **75% women.**



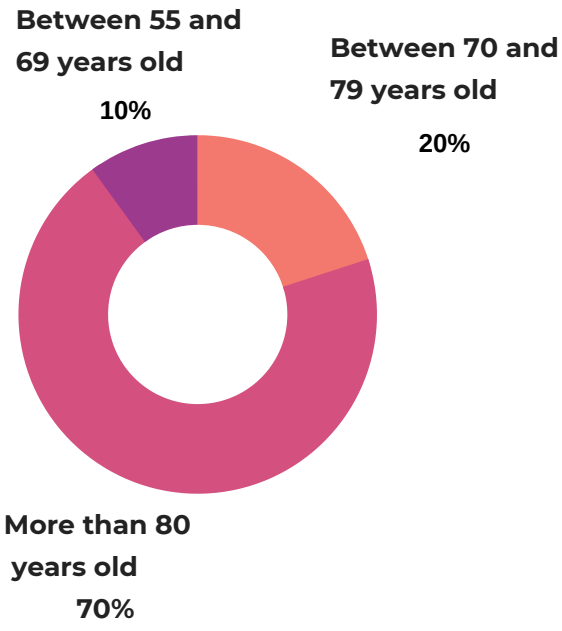
Place of residence

76% of the beneficiaries live at home, 17% in a retirement or nursing home.



Age

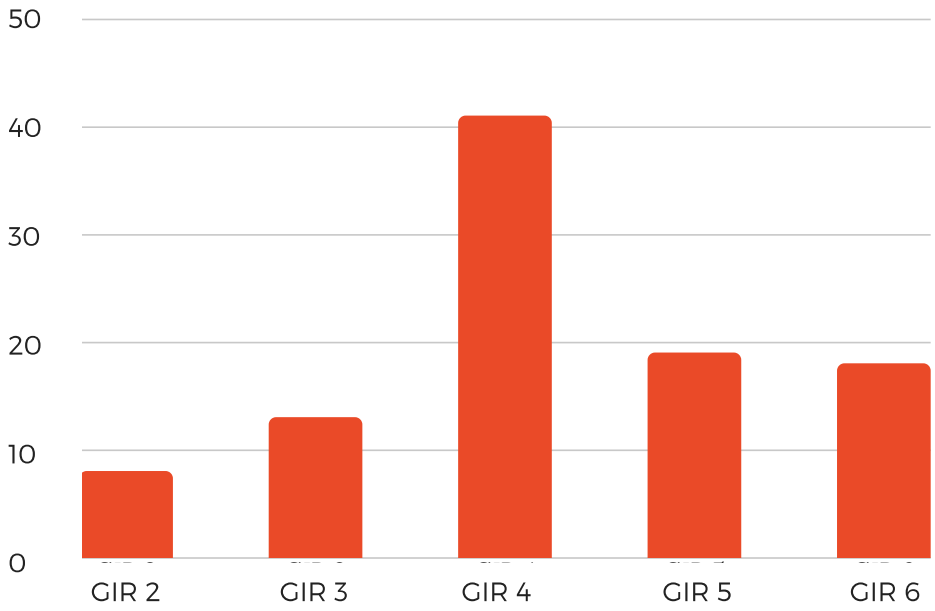
70% are more than eighty years old.
The youngest beneficiary is 57 years old and the oldest is 102 years old.



Degree of dependency

In France, the degree of dependency is often measured according to the national Aggir scale. The degrees of loss of independence are classified in 6 groups called "iso-resources" (GIR in French). Each group corresponds to a level of help required to perform essential parts of a person's daily routine.

The diagram below also indicates the distribution of the 113 beneficiaries for whom we know the GIR :



It has not been possible to obtain the GIR level of all beneficiaries involved in the study.

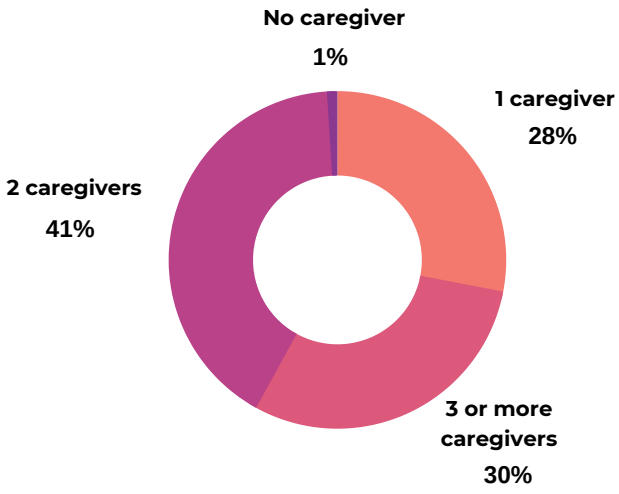
The majority of the beneficiaries involved in the study have a GIR level of 4: these people don't necessarily have a problem moving around, but must be assisted with bodily activities and meal preparation.

More information :

GIR 1	▸ A person confined to a bed or a wheelchair, whose mental functions are severely impaired and who requires the essential and continuous presence of caregivers ▸ Or a person at the end of their life
GIR 2	▸ A person confined to a bed or wheelchair, whose mental functions are not totally impaired and whose condition requires management for most parts of their daily routine, ▸ Or a person whose mental functions are impaired, but who is able to move around but requires constant supervision
GIR 3	A person who has retained their mental independence, some of their mobility, but who needs daily help, several times a day, with personal care
GIR 4	▸ A person who cannot get out of bed or a wheelchair alone but who, once up, can move around inside their dwelling and needs help with washing and dressing, ▸ Or a person who does not have mobility problems but needs help with body care and meals
GIR 5	A person who only needs occasional help with washing, meal preparation and cleaning
GIR 6	A person who is still independent and can perform all the essential parts of their daily routine

Relatives and family caregivers

In the case of our beneficiaries, **71% of them have 2 or more caregivers**. These caregivers are often the children of the elderly person. There may also be a neighbour, a friend or a personal care agency.



More information

For remote assistance services, it is necessary for beneficiaries to have at least one caregiver in their support network, who can be contacted by an assistance platform or by text in the event of a problem.

In the event that a beneficiary has no emergency contacts on this list, he or she could sometimes benefit from a specialised intervention service available 24/7.

Needs expressed by retirement homes, beneficiaries, family caregivers and professional caregivers

This information was collected through satisfaction surveys (see Appendices 2 and 3) : beneficiaries and caregivers satisfaction survey) undertaken systematically. Thus, it was possible to obtain very precise feedback from users on the services offered and their desire for these services or for new functionalities.

The needs of operating professionals in retirement homes

The following important points were brought to our attention by retirement home directors, managers or operations managers:

- **Being different from other homes** with high value-added services for their residents.
- **Making future tenants want to move into the facility** in order to quickly ensure **a high occupancy rate in residences** when they go into operation.
- **Supporting residents as they age and making it possible for them to stay as long as possible in their own home.**
- **Having a tool to lighten their work** on a daily basis.

As a reminder, retirement homes are accommodation for independent, able-bodied or semi able-bodied people over 60 years old. This type of housing is an excellent way for older people to prevent isolation by fostering social ties while maintaining their independence.

The staff at the home provide daily support for the pensioners living there.
Their job is to organise activities for the residents and support them if need be.

The needs of the beneficiaries

- **To remain in their own home :** this is a wish shared by **90% of elderly people in France.**

> *"I don't want to leave my home."* [2]
>
> Marise, 75, equipped with the Otono-me service for 9 months.

- **Being rescued in case of a fall** : the figures show that **81% of falls happen at home.**

> *"If I fall, I need to be able to call for help and be rescued."*
>
> Pierre, 80 years old, equipped with the Otono-me service for 1 year

- **Living safely** in their home.
- **Making no changes** in their daily lives.

> *"The sensors did not change anything in her daily life. And I am sure that she does not even realise that she has sensors in her home."*
>
> Marianne, the daughter of Christa, who has been equipped with the service for 2 years

The needs of caregivers

- **Knowing what's going on with my loved one at any given moment :** I phone him and he doesn't answer. Is he doing OK at home? Is everything all right ?
- **Being able to see my loved one's activity during the day or previous days :** did he sleep well? Did he go for his usual walk ?
- **Knowing if the home care worker has visited :** did someone get my loved one up this morning? Did he get a good night's sleep tonight?
- **Needing reassurance :** does someone watch over him 24/7 and protect him if anything goes wrong?

> *"Thanks to the Otono-me App, I know if there has been any movement at my Mother's house and that I will be notified quickly if anything has happened."*
>
> Hélène, daughter of Pierrette, who has been using the service for a year and a half

According tol'OCIRP[3], the typical caregiver is in the following situation :

They are on average 52 years old.
They work 58% of the time.
They are mostly women.
In 20% of cases, they have health, physical or psychological problems.
They live on average 226 km away from the person they care for.
A third dies before the person they care for.

We were able to find the main features of these characteristics among the caregivers in our study, namely a majority of women living far from their elderly relatives.

The needs of human service professionals

The main expectations we heard from the directors of human services agencies, area managers or and carers were :

- **Knowing whether or not the beneficiary is at home.**
- **Being able to trace information.**
- **Being able to raise an abnormal situation** so that it can be dealt with by their superiors, family or colleagues.
- **Being able to better coordinate** with the other home carers.

3 The technological solutions implemented

Scope of coverage for the technical solutions provided

Ageing well is a vast topic. In the course of our projects and contact with different players of the elderly care sector, we have identified and listed a number of key points for ageing well at home

More generally, the needs that professionals in the field of ageing well must take into account for the beneficiaries and their families cover very broad fields that affect all aspects of their daily lives :

- **comfort**,
- **security**,
- **better coordination** between those coming to the beneficiary's place of residence,
- **prevention**, to act before falls and reduce the risk of falls through :
  - maintaining physical activity,
  - maintaining a social life,
  - good compliance with medicines and, more generally, medical recommendations,
  - the detection of any deterioration in the person's state of health and its proper management,
- **serenity**,
- **motivation**,
- **stimulation**.

The coordination of the various local services from which the elderly person can benefit, such as home delivered meals and shopping, home care, and even family support is a real plus. Effectively communicating information between professional and family carers, and also between healthcare and medico-social professionals, is essential.

Involving the person, at the centre of the device, is **crucial.** Their well-being, self-esteem and motivation are also key. They must be surrounded and supported. This role can be fulfilled by a multitude of people: those close to the person such as neighbours, family members, friends. But equally this can include professionals and organisations providing services to individuals, local services (for small DIY jobs, for example) or medical and paramedical personnel.

Faced with these needs and issues, the new digital tools bring real added value. While most families have already heard of the medical emergency medallion to be worn on one's person, and which can be pressed for help in case of a problem, few are aware, however, that these remote assistance devices can now be supplemented by sensors installed in the dwelling, allowing the activity to be monitored remotely.

Thanks to sensor data and artificial intelligence algorithms such as those of the Telegrafik platform, it is possible to detect an activity anomaly without the person even having pressed a button: a real plus for the safety of people who are not always able to call for help, as well as for relatives, who can connect remotely on their smartphone to check on their relative.

Besides, it is sometimes difficult for families to remotely assess their elderly relative's situation or to detect and deterioration. Sensors can make all the difference, and provide information about any additional services needed: restless nights over the past few days will draw the attention of family and friends to a potential change in the person's state of health. A family who observe that breakfast is becoming less regular can decide to put in place someone to help their relative get out of bed and provide them with a nutritious breakfast every morning.

Finally, staff at associations and companies providing services to elderly people are well aware of the notebook system, which enables each member of staff to report their intervention at a beneficiary's home in a notebook that will be read by the next person intervening.

Thanks to digital technology, **the notebooks are becoming available online** and can therefore be consulted remotely. They thus allow professionals to coordinate with each other, and families can also consult them remotely and better transmit their instructions.

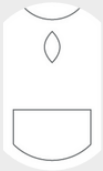
Details of existing technical solutions

Intercom

It puts the beneficiary in contact with an assistance centre or the reception of a retirement home in order to check whether everything is fine. The person does not need to get close to it, the intercom is equipped with a very efficient microphone and a loudspeaker which allows them to hear it from their sofa. It is just plugged into an electrical outlet and does not need to be connected to the home's telephone system.

Medical emergency medallion

Also known as a fall detector, it is the solution historically used by elderly people. In the event of a problem (fall, discomfort, desire to talk, etc.), they can press the central button on the medallion to be put in touch with an assistant. Fall detectors also detect certain types of falls automatically.



Motion sensors

These discrete sensors use passive infrared technology that detects a person's movements through the different rooms of their dwelling. Without a microphone or camera, this solution is not intrusive and allows you to follow changes in a person's activity over time to detect risky situations. These are the same types of sensors used in alarm systems.

Door opening and closing sensors

These sensors are placed at the entrance to the dwelling. They make it possible to know whether the door is open or closed and thus to determine, in coordination with the other sensors, whether the person is at home or not.

Light path

Installed next to the bed, this device turns on automatically at night as soon as the person gets up to go to the toilet. This solution is simple but very effective in avoiding falls that often occur at night between the bedroom and the bathroom.

In addition to these home automation devices, new types of coordination tools, such as digital notebooks, are increasingly being set up. The information collected in these tools can be used by the Telegrafik platform, which is able to cross-reference it with activity information.

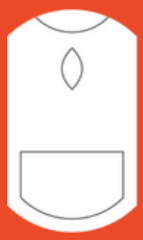
Telegrafik's Otono-me solution : Installation and operation

The Otono-me Home and Retirement Home service was installed in the dwellings of all the beneficiaries covered by this study.

In order to benefit from the solution's alerts and vigilance, discreet sensors are installed in the main rooms of the person's dwelling : kitchen, living room, bedroom and entrance/hallway. There's no need for an internet connection or landline phone - a plug socket is enough.

Medical emergency medallion

4 motion sensors

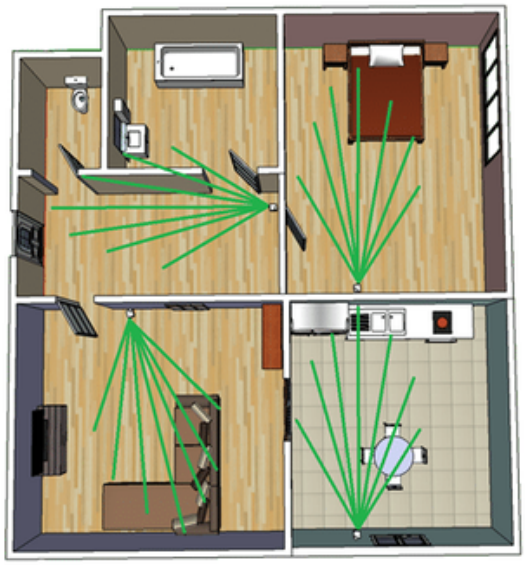


Door sensor

Call terminal

Installation is a key part of the service. The sensor fields must not overlap and must be positioned in the passageways that the person uses the most in his or her dwelling.

Below is an example of a typical dwelling equipped with 4 motion sensors. The installation includes a sensor in the sleeping area (bedroom), one in the dining area (kitchen), one in the living area (living room) and finally one in the passageway (corridor, entrance, bathroom and toilet access) :



In the case of larger dwellings, it is not necessary to equip all rooms with a sensor, as the system works “zonally” in the dwelling.

The door opening and closing sensor must be installed on the door allowing the beneficiary to leave their home.

The service works immediately upon installation and hardware activation. Then, day after day, thanks to Telegrafik's patented artificial intelligence technology, the device learns the beneficiary's lifestyle habits. After one month, the software can then trigger automated alerts in the event that abnormal activity is detected, such as :

- a fall,
- discomfort
- unusual behaviour (e.g.: the elderly person did not go to the kitchen at midday for lunch).

The alert is then sent to the retirement or nursing home staff, or to the carers available 24/7. They contact the beneficiary via the call terminal usually installed in the living area (living room). The intercom is equipped with a microphone and a loudspeaker: the beneficiary can speak and be heard without even moving.

Relatives have the ability to remotely monitor the situation via their smartphone or computer and set up personalised notifications.

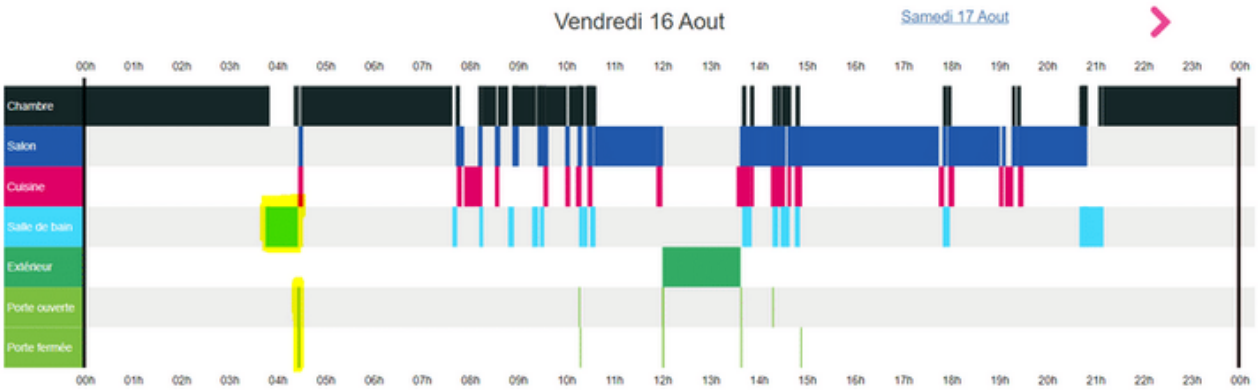
Detailed characteristics of Otono-me Home and Residence

In order to be easily integrated into the beneficiary's home, **solutions must be discreet**. The sensors are installed more than 1.5m above ground and do not emit sound or light. They are thus completely forgotten in the first week following installation, as many beneficiaries have testified.

Sensor-based solutions work alongside worn solutions. Adding an actimetrics pack in addition to traditional remote assistance improves personal safety and makes it possible to detect a risky situation even if the person does not always wear their medallion.

You should know that **on average less than 1 activity anomaly alert is sent per month and per beneficiary. Over time, the alerts sent are extremely accurate, comparable to tailor-made alerts for each beneficiary.**
The support platform follows a specific script according to the type of alert received. For example, it will not use the same vocabulary if it receives a Medallion Press Alert or an Activity Anomaly Alert. As a result, calls received by the beneficiary in the event of activity anomaly alerts are perceived as calls to talk to someone. If all goes well, the person will have had a conversation with a remote operator, which can, in some cases, be comforting. In case the person is not feeling well, they will be helped.

Here is an example of an **unusual situation automatically detected** as part of the study, where we needed to make sure everything was okay :
This beneficiary is in the habit of spending 20 minutes in her bathroom at night. Last night, she was there for 34 minutes. This constituted an activity anomaly. An alert was therefore sent to the warden of the home who went to the resident's accommodation to check on her.



Finally, **weak signal detection** algorithms are able to inform professionals when the beneficiary's state of health declines, either over the last few days or over weeks or months.

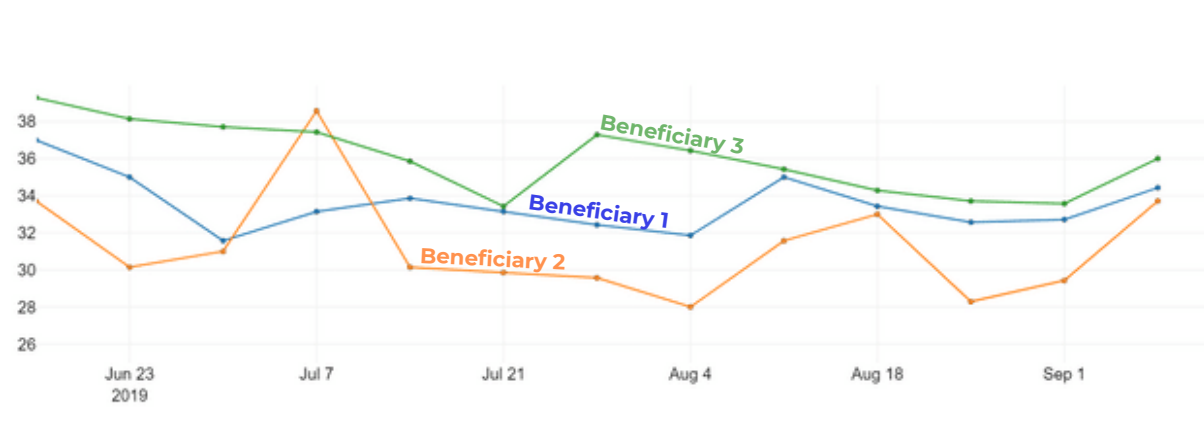
Weak signals correspond to **unusual behaviour that could be a sign of potential weakening**. In the case of frail people, this abnormal development, whether sudden or more progressive, requires an investigation by the professionals/helpers who will check whether the person is becoming frail and whether appropriate actions should be taken to prevent this weakening.

Les objectives :

- **Preventing risk situations.**
- **Preventing isolation,**
- **Bringing the person closer to a professional** when they need it the most.

Here are two examples of indicators monitored for weak signal detection :

Overall activity indicators : the graph represents the overall activity in the dwellings of 3 beneficiaries, calculated from the average number of room changes by the beneficiary each week.



Legend : *Average number of room changes/week.*

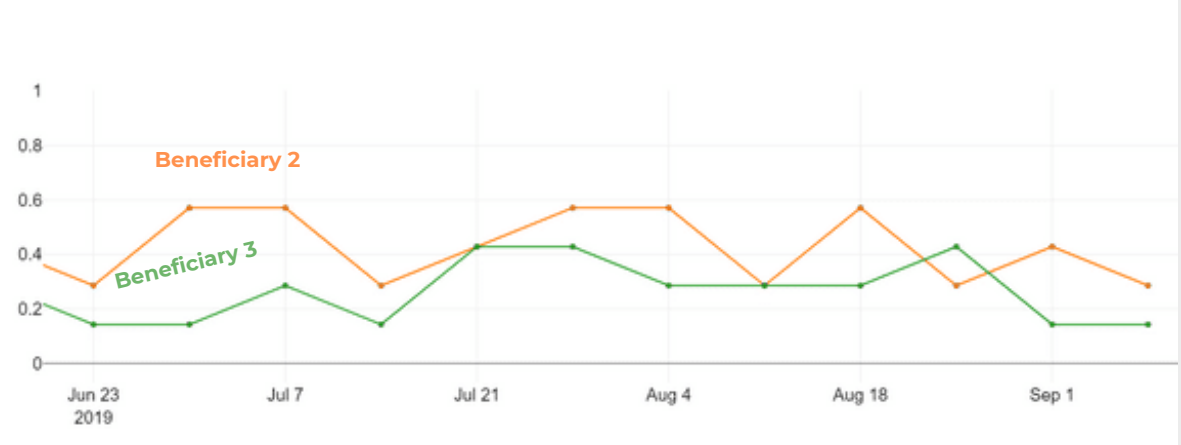
Highlights :

Beneficiary 1 has a stable activity curve. They receive regular visits from caregivers (for example, to get them in and out of bed). These visits have no impact on their activity curve because they are regular and constant over the weeks.

Beneficiary 2 experienced an increase in activity the week of 7 July.
We can deduce that they may have received more visits during this period.

Beneficiary 3 has a slight decrease in activity as the weeks go by.
Nevertheless, the decrease is not large enough to send a "weak signal" alert.

Night activity indicators : the graph below represents the monitoring of night-time rising for 2 beneficiaries, i.e. the average number of room changes per week during the night.



Le **beneficiary 2** rises between 0.3 and 0.6 times per night.

Le **beneficiary 3** as for him rises between 0.1 and 0.4 times per night.

4 Qualitative results

Beneficiarie's acceptance of service - before and during installation

The **installation** of the sensors is a **crucial moment** that can raise a lot of questions for an elderly person : "What's installed in my house?" - "How does it work ?"
These questions must be taken into account by the installer, who will then reassure and explain all these elements to the elderly person and the family members who may also be present.
It is essential to find out from the elderly person about their lifestyle habits. Positioning the sensors in the most visited areas of the home is key to ensure that the analysis of the elderly person's activity is as accurate as possible. The installation of the sensors is simple: it does not require drilling into the walls, double-sided tape is enough to fix the sensor.

The beneficiary will sign a **consent contract** at the time of installation. Indeed, GDPR (General Data Protection Regulation) requires full and transparent information to be provided to the people affected by the service. The consent contract presents the Otono-me service as well as the data that will be collected and used. The beneficiary has the choice of ticking or not ticking the box that validates relatives' access to the Otono-me application. They can also decide who will have access to the application or not.

Once the equipment is installed, beneficiaries quickly forget about the sensors, and most of them don't pay attention to them after the first week.

93% of senior citizens equipped with the service completely forget about the hardware.

"Mum completely forgot about the hardware. She still waits for the smoke detector to flash to make sure it's working."

Brigitte, daughter of Huguette,
using the service for 6 months

"I felt like I was being "spied on" at the beginning, but now I've completely forgotten about the Service."

Jacqueline, 82,
using the service for 1 year et 1 month

Beneficiarie's and their family caregiver's acceptance of the service

Beneficiaries are contacted via the intercom or on their telephone in case of abnormal activity. These calls are seen by elderly people as friendly calls, when they do not have a serious problem at the time of the call. They are thus considered reassuring, with beneficiaries telling themselves that they will be protected in the event of a problem.

83% of elderly people feel more reassured since they have had the Otono-me service installed in their home.

"I have health concerns and I have already had a fall. Thanks to Otono-me, I feel reassured."

Paulette, 69,
using the service for 1 year et 5 months

"Je tenais à vous dire que je me sens rassurée depuis que le service est installé chez moi !"

Nicole, 69,
using the service for 7 months

Caregivers are often worried about their elderly relatives. Otono-me reassures them on a daily basis because they know that if their loved one comes into any difficulty, they will be rescued.

More than 70% of family caregivers are reassured.

"My daughter now feels reassured, she knows that she will warned about the smallest of problems and no longer has to worry all day long about whether I have had a fall."

Elise, 91, using the service for 11 months

In cases where people were able to test the service free of charge for a few months, most of them then asked to take out a paid subscription :

More than 70% of the beneficiaries who benefited from the solution for free wanted to keep the Otono-me service after their free trial and **take out a paid subscription[4]**

The main reasons cited for retaining the service were the following :

- Beneficiaries or their relatives feel more reassured since the service has been installed.
- These people are prone to falls and need to be able to be rescued if something goes wrong, even if they are not wearing their medical emergency medallion.

"I've already fallen many times and I feel that I am slowly losing my independence. Otono-me allows me to stay in my home safely."

Lucette, 80, using the service for 1 year et 5 months

The benefits of connected solutions for ageing well

The satisfaction surveys conducted among the beneficiaries who have been equipped with the service and the reports transmitted by the assistance platforms have made it possible to identify a number of advantages to Telegrafik's connected solutions :

Reacting quickly in the event of a fall : some beneficiaries have had a fall and have not been able to use their emergency medallion. The Otono-me service took over and the beneficiary was rescued.

Delaying the move into a nursing home : some beneficiaries were able to stay at home for an additional 6 to 12 months instead of moving to a retirement home.

"I want to avoid moving into a retirement home for as long as possible. For me, Otono-me is a real alternative !"

Micheline, 88, equipped with the Otono-me service for 1 year and 7 months.

"The Otono-me service has allowed my mother to postpone moving into a retirement home by 18 months!"

Marianne, daughter of Pierrette, equipped with the service for 1 year

Saving lives : we have protected lots of isolated people who have had few or no visitors and could not have been rescued quickly without unusual behaviour being automatically detected.

Preventing falls or deterioration of the beneficiary's state of health : monitoring indicators enables the preventative detection of changes in behaviour that could signal potential weakening. For example: a person is going to the kitchen less and less often. This can be a sign of malnutrition, which can lead to the long-term weakening of the beneficiary. Taking control of the situation early helps to avoid future risks.

Effectively informing caregivers : the Otono-me application is an extremely useful tool for caregivers, whether they live close to their loved one or further away.

Living at home for longer

Where appropriate, we have systematically asked beneficiaries wanting to cancel the service for the reason why they want to stop using it.

The main reasons were as follows :

Financial reasons (in 14% of the cases it was not impossible to pay the monthly subscription),

Moving to a nursing home (in 20% of cases),

Failure to understand the added value of the service in 28% of cases (e.g. the caregivers do not use the application, no incidents happened to the elderly person during the trial period and so they do not see the need for it),

End of trial phase (people were satisfied but did not wish to pay for the service at the end of the trial phase in 30% of cases),

Death (in 7% of cases).

Aside from these specific cases, we found that people who had already had a fall or experienced such a difficult situation chose to be equipped more easily and understood the contribution of actimetrics in addition to the emergency medallion.

Their goal : **ageing as long as possible in their own homes.**

"Well, I ended up thinking about it because I had had several falls and they advised me to use it at the hospital.
Finally, my children became convinced as I was told that I was at the stage where I needed protection in my own home."

Agnès, 90, equipped with the Otono-me service for 9 months

"The Service is vital for my grandmother and very reassuring."

Sandrine, granddaughter of Louise, equipped with the service for 9 months

Saving lives : specific instances of emergency situations

Finally, even if the service is not a real-time fall detector, it can save lives, as the testimonials below show :

"Thank you so much I am so happy I started using Otono-me with my father! I was convinced that when my father had a fall when he wasn't wearing his medallion. The Otono-me service detected it automatically and sent the fire SERVICE to rescue him."

Pascale, daughter of Ismar, equipped with the service for 8 months

"I want to say thank you as because of the Otono-me Service, I was quickly looked after when I had a stroke in October. I was delighted because the detectorS were very reactive and because of that, I am not paralysed today."

Colette, 73, equipped with the Otono-me service for 8 months

"Thanks to your thing [Otono-me], I am still here, so I want to say thank you. "

Jean-Paul, 70, equipped with the Otono-me service for 1 year

5 Quantitative Results

Rate of activity anomaly alerts sent

Here are the statistics for the 340 beneficiaries between mid-2017 and the end of 2018 :

	Average/month
Number of alerts related to a fall	**3**
Number of alerts related to normal activity	**135**
Number of activity anomaly alerts sent to the support platform/beneficiary	**0,58**

The following are examples of anomaly activity notifications that have been sent :

- *« On 02/10 at 3:24 am, the Otono-me department detected unusual activity in Mrs X's bathroom. »*
- *« On 26/09 at 10:37 pm, the Otono-me service detected unusual activity in Mr X's living room. »*
- *« On 05/04 at 5:22 pm, the Otono-me service detected unusual activity in Mrs X's kitchen. »*

Prevention notifications sent

Prevention notifications were sent to beneficiaries for whom their behaviour suggested a weakening over time.

« Mrs X has not been out for the last three days. »
« Mrs X has only been out half as much as in the last six months. »
« Mrs X got up three times more than the last 30 nights. »
« Mr X has been going out three times less than usual in the last three weeks. »

Application use rate

There are **different user profiles** for the Otono-me application :

Occasional users log on once a month to view the overall activity of their loved one; to disable the service when they visit their loved one and stay for the weekend; to activate the security settings when their loved one goes on holiday to protect their home, etc.

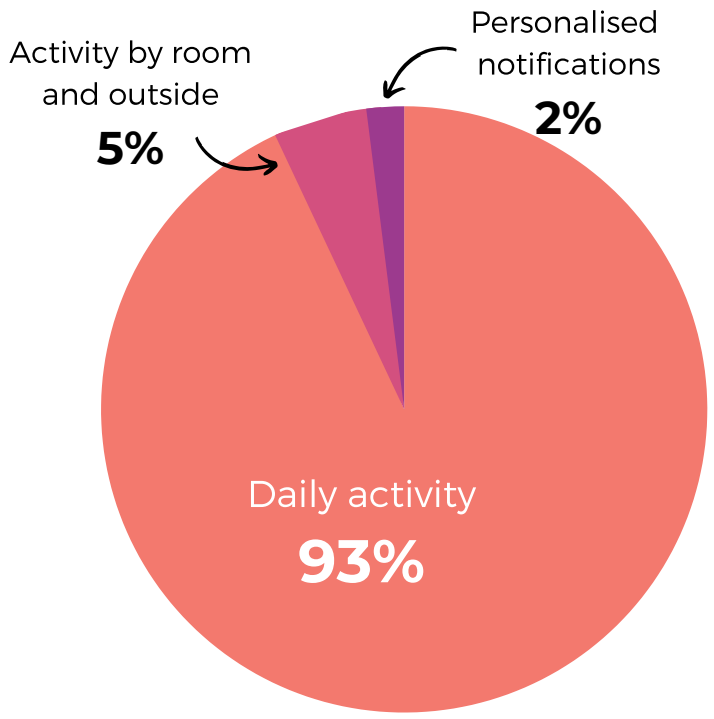
Weekly users consult the daily activity screen, which summarises their loved one's movement at home over the last 7 days.

Daily users log in to the application to see where their loved one is at home at a given time or if they have gone out.

The Otono-me service allows caregivers to rely on professionals. Nevertheless, some caregivers wish to be better informed and therefore use the Otono-me application on their smartphone or computer. On average, **30% of caregivers who have access to the application log on every month**.

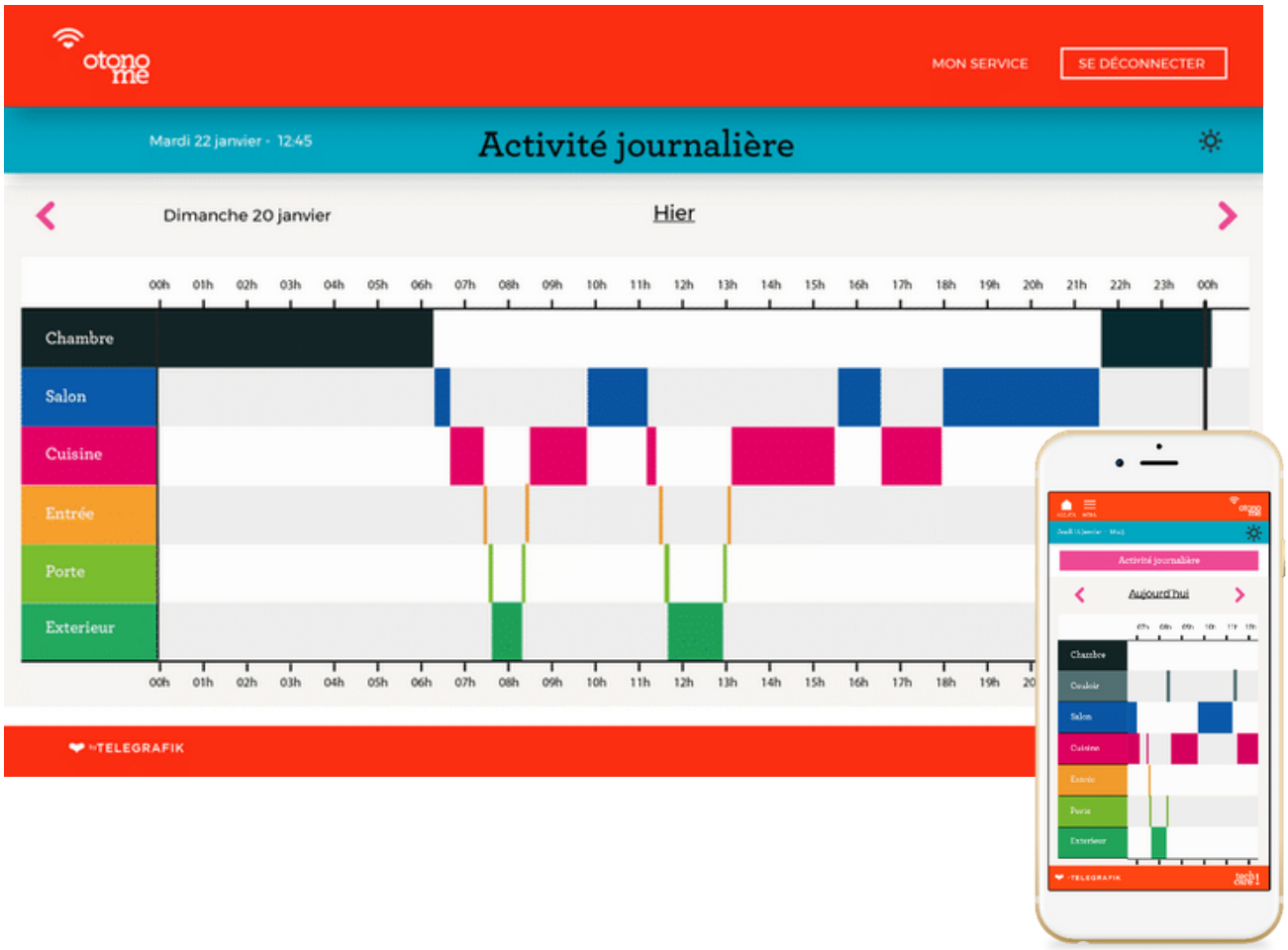
The Otono-me application is optional. The beneficiary has the option of refusing access to their relatives. Nevertheless, in 95% of the cases, the beneficiaries give their consent for relatives to access the application.

The most popular screen is the screen showing **the beneficiary's daily activity in their home (93%).**



Here is an example of a "daily activity" screen. This allows the carer to have an overall view of their loved one's movements at home and of their outings. The data is reported to the nearest quarter of an hour so as to avoid intrusive monitoring.

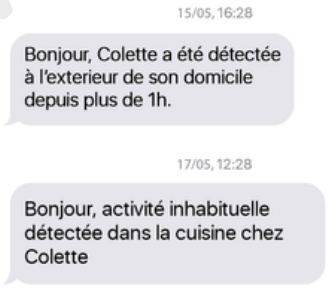
This tool allows caregivers to check that everything is OK: did my loved one have a good night's sleep and not get up too often? Does my loved one make it to the kitchen for meals in the morning, at lunchtime and in the evening? Does my loved one take his usual afternoon strolls? Did his home carers come to get him up and put him to bed today ?



"Thanks to the app, I can see at a glance the time that my mother spends in her bedroom."

Martine, daughter of Lisette, equipped with the Otono-me service for 1 year.

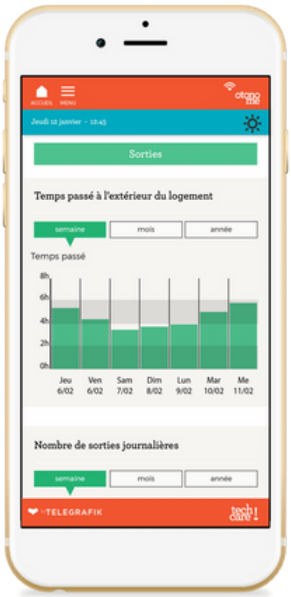
The “Personalised notifications” screen
The “Personalised Notifications” screen allows the caregiver to create notifications by text based on what is most important to them regarding their loved one's activity.

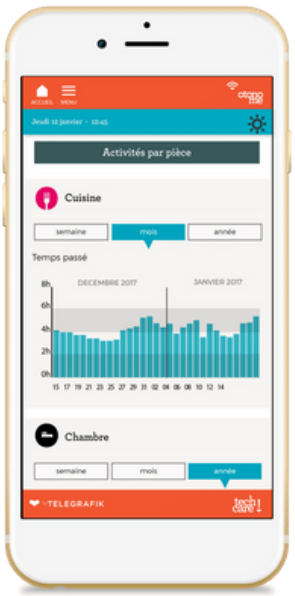


Examples :

- I know that my father is in the habit of going to bed around 9:30 pm, if at 10:30 pm he is not yet in bed, I will automatically receive a text message.
- I know my mother never leaves the house for more than two hours. It's been 3 hours since she left her home, and I will automatically receive a text.

These alerts are optional and can be personalised depending on the caregiver. Some caregivers create only a few or no personalised notifications, when others create them for all rooms and exits of the dwelling.
The solution sends **around 645 personalised text messages to almost 1000 caregivers every month.**





Other screens that finally allow you to go into more detail : they present the time spent in the main rooms of the dwelling over a week, a month and a year, as well as analysing outings from the home.

These screens are used less because they are more complex for the caregivers.

As a reminder, caregivers are on average over 50 years old and are not always technophiles. But there have been times when some caregivers have decided to buy a smartphone to use the application after not having one before.

Finally, thanks to the returns collected, we discovered a user behaviour that we had not originally foreseen. Indeed, when the caregiver connects to the application and discovers behaviour that does not seem "normal", they will call the person to talk about it and finally start a more general conversation. In this way, the information from the application is transformed into a "reason" for calling and will therefore help to encourage the link between the elderly person and their family.

Example :

! It's Wednesday and Mum has not yet gone out to join her friends, contrary to her normal habits.

I can see on the application that she stayed in her bedroom all afternoon. I can call her and check up on her.

> *"My son uses the application and calls me sometimes so that we can talk about what I have been doing."*
>
> Hélène, 96, equipped with the Otono-me service for 1 year and 4 months

6 Challenges encountered in the study

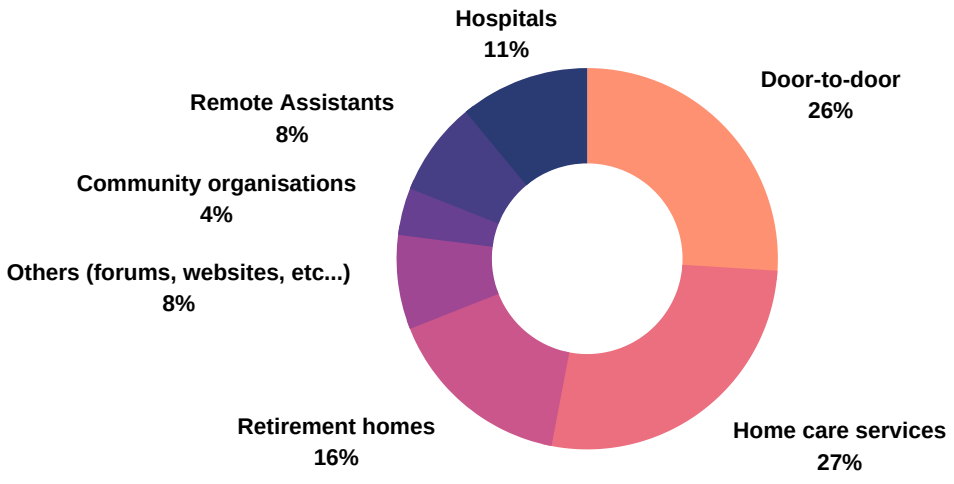
Recruiting beneficiaries

Remote assistance with an emergency call button has existed for about thirty years in France. Families have already heard about this device either because they equipped a relative with this solution, or because they know someone who already uses it. Solutions like the Otono service-me based on actimetrics, i.e. analysing a person's usual habits using discrete sensors, are not very well known among the general public.
We encountered difficulties related to this lack of knowledge, which gave rise to a certain mistrust and fear that the system might be too intrusive. The device also seemed quite complex and people had difficulty with imagining it operating effectively without their privacy being invaded. Others just didn't see any usefulness in it.
It was therefore essential to communicate widely about our solutions, using a multi-channel information campaign, and a vocabulary adapted to our target audience :

Media Relations : disseminating press releases that were picked up by the local press in each department,
website : creating websites to present the service,
Events : participating in fairs for elderly people,
Telephone conversations : calls to potential beneficiaries of the service to present the solution to them,
Production of information media : sending letters and brochures introducing the service.
Physical meetings : meetings with local actors (hospitals, human services companies, etc.) and door-to-door visits to potential beneficiaries,
Advertising inserts : purchasing advertising space in local newspapers.

We have also systematically contacted a large number of local actors in order to present the solution to them.

For information purposes, you can find below the nature of the professional partners of Well Ageing.



As part of the study, the actors who recommended the service the most were human service companies, retirement homes and hospitals.

These actors are in daily contact with elderly people. They are aware of their needs and are considered as trustworthy partners by the families.

> *"It was my doctor who advised me to keep the service !"*
>
> Renée, 85, equipped with the Otono-me service for 7 months

In the case of a fall, a home care worker, a residential warden or social worker will be consulted by families to advise them on the most appropriate solutions to protect their elderly loved one.

A network of carers across the country

The study's project have provided the opportunity to build a **national network of actors in the field**.

The aim: being able to identify the people who need the service, and confirming their wish to be equipped, installing the equipment within less than 3 days. Indeed, beneficiaries often need the service quickly, for instance when they come back from hospital. To meet these requirements in terms of responsiveness, good coordination of actors is a key element. The Telegrafik teams have thus demonstrated their adaptation skills to different actors, within a variety of areas. Indeed, associations, hospitals and private companies do not work in the same way and have different processes.

To set up this network effectively, we have systematically contacted a large number of local players working in the field of ageing and met with them to present the service to them. We trained them and gave them all the tools they needed (brochures, welcome booklets, user manuals for the application, vouchers for the installation of the service, etc.).
Some have also become Otono-me approved installers, after receiving physical or remote training by our teams, and being physically accompanied for the first installation.

More than about twenty installers have been involved in the projects in order to install the Otono-me service.

Local policy and disparities in approaches to new technologies

The other challenge for Telegrafik has been being met with a great disparity in the actors' approach to new technologies.

In particular, we met with specialists in elderly accommodation and independent residences/retirement homes. Some have a strong appetite for innovation, others are familiar with newer technology.

Nevertheless, we have found that the sector is evolving. More and more actors ask themselves what the right level of services is to offer to elderly people within their buildings.

Notably, connected solutions like Otono-me provide concrete answers to the societal issues raised by property programmes such as retirement homes for elderly people.
From now on, new retirement homes integrate solutions that have arisen from reflections on ageing well services that this type of housing must be able to provide :

- **Home automation**, with buttons for the shutters, heating management, access management and connected locks, along with light paths at night.
- **Fall detection**, and sometimes geolocation solutions to easily rescue a person if they became stuck in a staircase between two floors. In some cases, connected floors are installed.
- A **digital concierge service**, and restaurant or activity booking service activities accessible from their television using a remote control.
- **Connected medical devices**, since ageing sometimes comes with illness,
- Finally, at the heart of the system, **human support services**, including nursing, and personal assistance.

Local policies also play a key role in the perception that people have of these innovative solutions. We met with departments like Aisne where innovation in the elderly care sector is an integral part of their strategy. Other departments, however, are still lagging behind on these issues. As a result, families do not have the same ease of access to these solutions or indeed help with financing care.

Conclusions

This study, based on 3 years of projects carried out with 340 beneficiaries, has enabled the following main points to be identified:

- **Elderly people approve of the Otono-me service:**

93% of elderly people equipped with the service completely forget about the equipment.

83% of elderly people are reassured that the Otono-me service has been installed in their home.

+ than 70% of beneficiaries recommitted to the service after the first trial period of the solution.

- **Caregivers have gained peace of mind on a daily basis thanks to the Otono-me service and its interfaces:**

+ than 70% of family caregivers are reassured.

30% of caregivers with access to the Otono-me application log on every month.

93% of caregivers connect to the screen showing the beneficiary's daily activity in order to see their relative's activity during the day or the last 7 days.

Connected solutions offer strong added value for both professionals and families, and function alongside human support for elderly people.

We are convinced that it is becoming essential to be able to offer complete, accessible and adapted solutions according to the fragility of the beneficiary, wherever they live.

It is also necessary to be able to support people who are more fragile and who are on the verge of moving into a nursing home. Specific support in a retirement home and the “Beyond the Walls of the Nursing Home” initiative are both excellent ways for elderly people to benefit an easier transition from their home to retirement home, or to avoid rushing in to moving to a nursing home. “Beyond the Walls of the Nursing Home” is an initiative allowing dependent elderly people to benefit from the technological solutions and services available in a nursing home from the comfort of their own home.

The “Beyond the Walls of the Nursing Home” initiative has various components :

Involving human services, carers and domestic aid: help getting up and assistance with washing are for example often indispensable.

Receiving care from nurses and a monitoring by a specialised doctor.

Providing services to make people's daily lives easier (e.g. meal deliveries)..

Prioritising security with a remote assistance system. The solution must be adapted to the person’s needs. This can consist of a medical emergency medallion, or enhanced remote assistance such as the Otono-me service with motion sensors and a bed sensor.

Prioritising the coordination of the different actors and the family through tools such as the notebooks, in order to monitor the evolution of the elderly person’s condition: did they get up all right this morning? Did they wash? Did they have a restless night ?

Finally, when the person's state of health no longer allows them to stay at home, the “Beyond the Walls of the Nursing Home” makes it possible to gently steer the person and their loved ones to accept moving into a nursing home.

The desire for home care is shared by both elderly people and their caregivers, but also by the government, as evidenced by the law of 28 December 2015 concerning social adjustment to an ageing population, which put the focus on homecare for the elderly.

Now it is time for strong and coordinated initiatives by the various actors and stakeholders to make this wish a reality for a greater number of beneficiaries.

Finally, as a conclusion of this study, it is worth remembering that technology is no longer the problem today.

Who are the actors capable of accelerating the adoption of high value-added technological solutions by the beneficiaries who need it ?
Who are the right partners to accelerate this digital transition made essential in the current context of an ageing population, and give rise to a genuine mass industrial strategy ?

The digital revolutions we are experiencing will bring their share of answers.
But one thing is clear: the issue will be proximity. Technology alone will not solve the challenges posed by the ageing population, and good coordination with local services will be key. There are so many reasons to aim for progress in the development of the elderly care sector.

Appendices

Appendix 1: Telegrafik - Who are we ?

Telegrafik was created in 2013 from a simple conviction: technology, and in particular advances in the digital field, must be made available to human services and help provide better care for the most fragile among us. This is what we call SMART CARE.

A certified “Young Innovative Company”, Telegrafik offers connected solutions designed to make life easier for healthcare professionals and the families of beneficiaries, all over France. Our OTONO-ME Nursing Home Services, OTONO-ME Home and Retirement Home services have proven themselves to automatically detect falls and other risk situations, and thus enable hundreds of frail or elderly people to live at home in complete safety, in connection with their professional and family caregivers.

Internally, we are a dynamic and close-knit team of 13 people, based in the heart of the French Tech Toulouse ecosystem. Thanks to our collaborations with many recognised partners such as LAAS-CNRS, we've built up a body of knowledge that is unique in the field of sensor data processing with specific algorithms, developed in house.

What makes us different? The priority we give to prevention in our approach to Smart Care and in our technological choices. By paying great attention to the quality and robustness of the connected solutions we develop, we want to provide a natural and flexible user experience, that protects without being invasive.

Read more : www.telegrafik.fr

Appendix 2 : Testimonials - Customers and Partners

Eric Mohamed –
Installer, Echo Médical

Hello Mr Mohamed, you work for the company Echo Medical: can you briefly tell us about your activity?

Echo Medical offers medical equipment for rental and sale: beds, wheelchairs, medical shoes, etc. I have been working as a Technical Sales Representative in the company for a year and a half and I carry out the installation and de-installation of Telegrafik equipment in people's homes. I have installed between 40 and 50 of Telegrafik's Otono-me solutions.
Personally, I have 15 years of experience in medical equipment and I am a fan of innovation and new products. I thought it was a good idea when our director decided to offer Telegrafik's solutions to patients. This is a plus for our beneficiaries, and also for us compared to the competition.

When you come to people's homes, what are the most common reactions you observe regarding technological solutions such as Telegrafik's ?

At the very beginning people are afraid of being filmed, so I reassure them by explaining that there is no video involved in Telegrafik solutions. And then during the installation, as I am very meticulous, people are immediately reassured. The beneficiaries and their families are very happy afterwards! This type of solution serves many purposes: sensors are very useful because if the person falls down, faints or becomes a bit dazed, they cannot use a medallion. But the sensors will detect it and send the alert, allowing us to rescue them. For example, I installed Otono-me in the home of a lady who had a fall: she had seen the product some time before and hesitated to sign up to it, then she had a fall and stayed on the ground for a day and a half. She was in a very bad shape, and she regretted not having opted for Otono- me before. For one gentleman I met, it was a joy because he could see his mother's outings on the application and as she was becoming more senile, he could ensure that she returned home safely, that she didn't get into trouble. Personally at the time I wanted to keep my grandmother at home, I knew her needs, and well I would have wanted her to have this device.

As someone who regularly uses Telegrafik solutions, what do you think? Are they easy to install, are they efficient ?

They're easy for me to set up. Of course you still have to do it several times to properly integrate the installation protocol, I would say 3-4 times to be perfectly comfortable. Since every installation is different, both in terms of the person and the house, I sometimes called Telegrafik to modify what was originally planned. We've worked really well together! I can call their team on my phone, we text each other back immediately, it's great to work like this! In terms of customer feedback, I have received 95% positive feedback for Otono-me. It's a really good product : I can't give you any negatives because I haven't seen any, no problems at all!

Sandrine Taffary - nurse coordinator, Ehpad St Louis

Good morning, Ms. Taffary, could you briefly introduce us to your role in the Saint-Louis nursing home and tell us how you came to know about Telegrafik ?

I am the Nurse coordinator for the "Beyond the Walls of the Nursing Home" initiative attached to the nursing home located in rue Saint-Louis in Rennes, which is part of the HSTV group. My role is to coordinate and supervise a small team of 2 geriatric care workers. I came to know about Telegrafik because they were the ones who were selected following our call for remote surveillance projects, to make sure people are safe in their homes. Telegrafik best met our specifications.

In your profession, you are responsible for the quality of care provided on a daily basis and for applying good geriatric practices. Do innovative technologies such as those offered by Telegrafik help you in your work, and if so how?

The Otono-me Home solution, which is the one we use reinforced with other options, is very practical as it allows us to collect a person's lifestyle habits at home. In a nursing home, it is simple because the patients are always within the walls, but it is more complicated at home: for example, what are the meal times? What time do they go to bed ? Or get up? The information delivered by the sensors allows us to schedule our visits and those of other staff.

Let me give you an example: a gentleman who lived alone with memory problems, everyone thought that he was getting up very early, so the private nurses made a habit of coming to his house first, around 7 o'clock in the morning. And when we installed the sensors, we realised that in fact the gentleman didn't get up that early, that he was woken up every morning by the arrival of the nurses and that he was going to go back to bed afterwards.
The system really makes people and families feel secure, and they are very happy with the remote surveillance system. They know that if there is a problem there will be someone there, that the situation will be handled. Some people have downloaded the application and find it quite handy. It is not at all seen as an intrusion, it allows them to be reassured. Then of course it is still technology, it will never replace a physical person. The interesting thing about Telegrafik is that the person doesn't have to initiate the call, the device does.

How do you see the future in your sector: will new technologies become the norm? Do you think that patients and their families will be able to tell the difference between facilities offering this type of service and others ?

I think so, because people are becoming more and more psychologically dependent. We see it at a nursing home level, for example in our closed unit, there is no medical alarm because they are not capable of performing the action by themselves. The ideal for us will be to be able to equip this type of person by generating an immediate alert. Telegrafik is very close to it and that's why I enjoy working with this system, because in terms of reliability, if they can't press an alarm button, it's great! This will inevitably develop, I think it will be much more common, since attitudes are changing: our younger older people of today will be our old people of tomorrow, they are people used to all the new technologies and therefore will call more and more for this type of solution. Already today, when I go to someone's home, I don't present all the options, and some families ask me for bed sensors, whether it's possible to issue alerts for this or that. They also like the application... Personally at the very beginning I was afraid that families would perceive this as an intrusion, because we install sensors, so we know roughly what's going on in the house in real time. In fact, what I perceived as the downside of the device, for them it is THE strong point, that it is so immediate and precise.

Arnaud Grimault -
Manager, Iris Assistance

Hello Mr. Grimault, your company Iris Assistance specialises in personal protection: how long have you been in business and what kind of people do you care for ?

I am the director of Iris Assistance, I created the company 5 years ago, and we are based in Limoges. Our aim is to ensure the protection of fragile, dependent people, whether they are at home, in retirement homes or even in nursing homes. We offer them a range of warning and protection solutions, often innovative, adapted to their problems: disabilities, particular illnesses, environment...

Have you noticed a change in the issues you mention since you started your business ?

I do not think that the needs of the elderly or the frail have really changed, it is just that, on the other side, there were not necessarily answers. My impression is that little has been done to bring existing innovations to older people, whether in home care or in retirement or nursing homes. The big companies in the sector, particularly in remote care, have not taken the lead in terms of differentiation or innovation.
In fact, I think that the market is in the process of developing, because for 35 years throughout France, people have opted for simple remote assistance: whether the person is elderly, chronically ill, cognitively impaired or not, there is only one way to protect them, a simple button trigger. However, if we decide that the most important thing is the person, then we understand that this technology cannot respond to every situation. People with cognitive impairment will not be able to push the button on the day. I see it every day: a range of solutions is needed that can be adapted according to the person's disability, fragility and dependency.

You have chosen to use new technologies, including Telegrafik solutions. The Libault report on old age cites the quality of care for the elderly and the revaluation of the professions in the elderly care sector as 2 key priorities. According to your experience in the field, can these innovative solutions be an asset to meet these 2 challenges ?

Yes, but there is more to it than that: the different tools available must be used to organise integration and coordination. We have chosen Iris Assistance to use Telegrafik technology, including Artificial Intelligence (AI), combined with home automation, in order to alleviate the problems of home care for dependent and frail people. But we need to know how to offer secure technology that adapts to each situation and is comprehensively integrated into the person's environment, helping coordination between the actors. I'll give an example: for an independent person, able to press a button if necessary, who lives alone but has family around to coordinate with, the classic remote care offer is adapted. For people who are a little more fragile and isolated, this time we would suggest a bracelet with a key box, along with an agreement with the fire service.

Finally, for people with the onset of cognitive problems, Telegrafik's Otono-me solution can be used: sensors and artificial intelligence will create a model of a person's life habits to highlight activity anomalies, suspected falls and discomfort. That's the advantage of this AI: it delivers weak signals, which provide a preventative aspect. For example, we can detect that the person has been to the toilet 7 times during the night, he has never done this in 2 years: the family is given the information, which is investigated by a doctor who thus identifies the onset of cystitis, which is treated quickly.

The range of technological solutions is vast! What advice would you give to a colleague wishing to choose a provider like Telegrafik? What should be taken care of to ensure that the beneficiaries are satisfied ?

The key is having the potential, by combining the analytical power of self-learning artificial intelligence and home automation, to adapt to people: one day you have a couple, more than just one person, who will move rooms to go to the ground floor for example. We need to choose a technology which, as in Telegrafik solutions, make it possible, by simply changing a few sensors, to follow the person throughout their life.
Personally, my project was to find solutions for dependent and fragile people, and to respond to the problems of cognitive disorders: I therefore did some technological monitoring at the European level, we tested many solutions and met with various players. Telegrafik's artificial intelligence was the most revolutionary. We asked ourselves several questions specific to the algorithm: is it self-learning or not? What is its capacity to digest information? What is its speed and its regularity? Can it be taught, in addition to self-learning? Based on all these elements and objectives, we chose Telegrafik. We are also very pleased to have been able to offer their Otono-me solution with a customised Iris Assistance application. As far as the families are concerned, they do not want to let go of this application, because they feel reassured and that is priceless.

In practice, on the spot, are you satisfied with your choice ?

Yes absolutely, otherwise we wouldn't have continued with it! We have been working with Telegrafik for 4 years, we are satisfied, we have a good basis for home care. Even for people who are GIR1, GIR2, very fragile and bedridden, thanks to this solution, we are able, to coordinate with the private nurse, the home carer, etc., within the framework of palliative care support. You get a level of quality that is even better than in a nursing home! We will continue to improve the service we provide. It's important to always evolve to better protect people. We are going to push forwards on the weak signals, to operate them in a simple way and especially to communicate them, to coordinate this information with our local actors, with the people around the beneficiary.

Rosa M –
A caregiver for Jacqueline D, equipped with the service since April 2019

Hello Mrs M, your mother-in-law has been equipped with the Otono-me device since April 2019, following a call for proposals with the Aisne funders' conference. Can you describe Mrs D's situation, what her initial need was, and why you chose this type of technology ?

My mother-in-law already had a remote alarm as with her disability she falls a lot, but she had to press the button. We know very well that with her illness she sometimes forgot to put on the bracelet or did not press the button at all while she was on the floor. When I was offered this system where I can see from a distance, on my phone if she is in the house or if she went out, and what time she came back, it seemed great to me !
We don't have to go round all the time to check on her, we can look at the situation on the phone and we can see that everything is fine. It's really taken the burden off of us.

How does your mother-in-law feel about this new service ?

Well, she's taking it well, because she sees it makes our lives easier. At first she was a bit reluctant because she felt like she was being spied on but as I told her, "they're not cameras, I just know you're there and that you're moving around". She realised it was for her own good. My mother-in-law tells me that she likes that sometimes we call her to ask her if everything is ok, sometimes she pushes the button and they are kind to her, so really there isn't a problem !

And what does this service bring to you in relation to your role as a caregiver? How do you use it? Would you recommend it to those around you ?

Frankly, we're happy, and I recommend it! When we happen to see people who need this type of system, I don't hesitate to talk to them about it. I don't know if you're implementing it in the Saint-Quentin area? Because I have a friend who might be interested... with coronavirus, I've seen some frail people who need to be told about your system. Remotely, even when you're on holiday, you can see that everything is fine. Afterwards of course we call regularly, but sometimes on holidays we don't pay attention to the time: "Oh no, I didn't call my mother!" but you go on and you can see she's in her room, she's already in bed, so everything's fine. At worst, we can call her when we see that she has been in the same room for a long time, if we find it a little strange. I's really good! I use the application a lot.

If, later on, your mother-in-law were to go to a retirement home, would you like the establishment to be equipped with this type of device as well ?

We'll make sure she's at home, or other options, but not in retirement home. Then there are certainly some good ones, but it really requires having the means. Normally, in a retirement home, there are regular comings and goings, so there is no need for detection. But it's precisely devices like yours that help people to avoid going into retirement homes! By coordinating with doctors, home carers, we don't need them. Today you are no safer in a retirement home room than in a room in your own home. With this system we can see that she's moving about...
Today, even for people who are bedridden, who have carers several times a day, with technology, you can see right away if there is a problem. So now, we can avoid retirement homes.

Appendix 3 : Beneficiary satisfaction surveys

Satisfaction questionnaire

Regarding your use of the medallion with the call button

1) How much do you use / wear the médaillon ? ☐ always ☐ sometimes ☐ never

2) Have you ever forgotten to use your medallion in case of a problem ?
☐ yes ☐ no ☐ I haven't had a problem

3) Do you feel reassured wearing it ? ☐ yes ☐ no

About the Otono-me service

1) What was the quality of the installation and the information you received?
provided ?☐ good ☐ average ☐ poor

2) Did you forget about the sensors installed in your home ? ☐ yes ☐ no
If no, why not : .....

3) Have you felt reassured since the service was installed ?
☐ yes ☐ no

4) Do you think the service also reassures your loved ones ?
☐ oui ☐ non

5) Did the service not detect a particular event? (Discomfort, fall)
☐ yes ☐ no
If yes, which one: .....

Comments on the service : .....

General Comments

1) Do you wish to keep the service ? ☐ yes ☐ no

2) Why ? .....

Appendix 4 : Caregiver satisfaction surveys

Satisfaction questionnaire

About the Otono-me service

1) What was the quality of the installation and the information provided to you ?
☐ good ☐ average ☐ poor

2) Have you felt reassured since the service was installed ?
☐ yes ☐ no

Comments on the service : .....

Using the application

1) Do you use the application ? ☐ yes ☐ no
yes, how often and what screens do you look at? .....
If no, why ?.....

2) Have you set up personalised notifications ? ☐ yes ☐ no
If yes, which ones ? .....
If no, why ? .....

Areas for improvement for the application

1) Would you like to be informed on the application (or by email/text) of any potential deterioration of your loved one's condition (number of times they get up, outings, unusual behaviour) ? ☐ oui ☐ non
Why ? .....

2) What do you think of the brand new Anti-Intrusion feature ? .....
3) What do you think of the brand new Deactivation feature ? .....
4) Would you be interested in a new feature that doesn't yet exist ?
☐ yes ☐ no
If yes, which one ? .....

General Comments

1) Do you wish to keep the service ? ☐ yes ☐ no

2) Why ? .....

Sources

1 https://www.santepubliquefrance.fr/maladies-et-traumatismes/traumatismes/chute

2 Verbatim accounts from Telegrafik projects

3 March 2019 : https://www.ocirp.fr/sites/default/files/ocirp_livret_dependance_accessible.pdf

4 Statistics of the project carried out by Telegrafik in Aisne department from April 2017 to January 2018

tech
care!

Contact us
05 82 95 50 52
contact@telegrafik.eu

Our News
www.telegrafik.fr/blog

TELEGRAFIK