



International Congress on Ageing (silverskills – a brokerage matching platform of older adults’ skills)

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Abstract:

The older adults represent a strong source of knowledge and wisdom which is not being employed in a useful manner. Nowadays, the quality time of elderly citizens is being negatively affected from the lack of opportunities or possibilities for them to keep applying their knowledge and skills on activities of their preference, even after their retirement. This trend is likely to cause even a more serious impact on the elderlies' quality of life as the projections from Eurostat estimate a significant increase on the elderly population over the next three decades.

TSBank project is developing an online platform - silverskills - that allows seniors to share their own skills and personal experiences in the form of volunteering outdoor activities or advices without leaving their comfortable environment. People looking for volunteering services or advices shall consult the platform and establish a direct contact with older volunteers, beneficiating from the platforms' automatic matching system of the specific skills, tailored to their needs. Three preliminary categories of services will be available in the platform: Consultancy (with a possibility for the elderly to perform the activity without leaving their comfortable environment), Tourism and Pet Sitting activities to be performed outdoors. The silverskills platform differs from other similar products and social networks in that it is focused on the elderly and the use of their skills (valuable and hard to find in the market), allowing to have a greatly simplified interface and more efficient match-making capabilities. Volunteers are encouraged to enrol in silverskills through elderly associations that will directly benefit from a percentage of the revenue stream of the platform. This paper presents the objectives of the project together with the platform functionalities aimed to create a positive impact over the older adults' quality of life and active aging through the use of their time and skills in a useful manner to society.

Keywords: active, aging, silver, skills, time.

TSBank Consortium

The TSBank consortium is composed of 3 leading organisations whose expertise complements each other and encompasses all needed areas of knowledge required to successfully develop the project.

IncreaseTime: a technology-based company, founded in April 2011, and its activity is centred on the development of innovative solutions based on ICT and wireless sensors networks. It is a provider of social and health care solutions intended for the domestic market or care homes, developing solutions which promote the quality of life of the general population, with special focus on patients with chronic diseases and on the independent, active and quality aging. IncreaseTime is experienced in managing and implementing R&D projects both at a national and European level, with a track record of successful endeavours related to both scientific research and proven technological innovation. Some of the projects directly related to the domain handled by TSBank are PRK_Treatment (training platform for Parkinson's disease patients) and TICE.Healthy (web store of healthcare applications with great interoperability and national adherence). Increase Time is the project leader coordinator of the project, as well as the main technological partner, responsible for the technical development of the solution.

Ana Aslan International Foundation (ANA): founded in the year 2000 as a research, ANA is a higher/secondary education as well as high-profile medical care organisation, with expertise in the integrated approach of healthy and active ageing and longevity medicine. It is member of the European Alzheimer's Disease Consortium, the coordinator of the Romanian Representative of The European Association for Predictive, Preventive & Personalised Medicine, an active participant to the initiatives of the International Association of Gerontology and Geriatrics, and collaborates with over 20 worldwide similar institutions, including with the Centre for Aging Services Technology – CAST (USA). Through its Centre for the Diagnosis and Treatment of Memory Diseases, ANA provides personalized geriatric services in acute care settings, day centres, or at home, with particular focus on brain aging and cognitive health management, and runs clinical trials related to the epidemiology, risk factors and medication of Alzheimer's dementia and other neurodegenerative diseases. Through its R&D department (the Ana Aslan Academy of Aging), ANA develops basic and applied research activities, with focus on the transfer of the obtained results into the practice of geriatric care. It is also an active promoter of the remote care of the elderly, and thus of the development of the second, advanced technology-based, costs saving segment of health systems. As a medical partner and end-user organization, ANA shared its multidisciplinary and methodological expertise in 5 EU or privately funded clinical trials and 15 FP6-IST, FP7- CIP-ICT-PSP and AAL projects. ANA is designing and implementing higher and secondary education programs, especially inside the Geriatrics, Gerontology and Old Age Psychiatry Chair of Carol Davila University of Medicine and Pharmacy from Bucharest. ANA will provide the end user information, scientific accuracy, and will organise the Romanian pilot.

The University of Applied Sciences and Arts of Southern Switzerland (SUPSI) is one of the nine professional universities recognised by the Swiss Confederation. Founded under federal law, SUPSI offers more than 30 Bachelor's Degree and Master's Degree courses, characterised by cutting edge education which unites classical theoretical-scientific instruction with a professional orientation. Great care is given to research, carried out in key sectors on competitively acquired projects with large European and national agencies or mandated by organisations and institutions. The laboratory of telecom telemetry and high frequency (TTHF) of SUPSI is traditionally very active in innumerable applied research activities. Thanks to numerous collaborations regularly maintained with industrial partners from Ticino, Switzerland and Europe, the TTHF laboratory has become a reference point for companies wishing to develop and implement new electronic systems or sensors with particular focus to applications in wireless telecommunications, high frequency and wireless sensors design. In order to help the development of the prototype the TTHF lab will rely on the Center of Competence on Aging (CCA) of the University of Applied Sciences and Arts of Southern Switzerland (SUPSI), created in 2011 to promote the well-being and quality of life of the population. The CCA deals with education, documentation and research on the actual situation of elderly in order to support professionals in this field and facilitate the culture of care, respecting rights, dignity and needs of the elderly person and the surrounding relatives. The activities of the CCA team are developed in respect of the concept of life quality and well-being. SUPSI will provide research in active aging, scientific accuracy, dissemination/exploitation of the results, and will organise the Swiss pilot.

1. Introduction

According to projections from Eurostat, the elderly will account for 29.5% of the EU-27's population by 2060 (compared to 17.5% in 2011). The projection for those aged 80 years is almost triple in 2060. This trend will cause an increase of social expenses in forms of pensions, healthcare and institutional or private care. Under this scenario public spending and insufficient support infrastructure for the elderly will be a major problem in upcoming years (European Commission, 2016), which in turn will impact in their quality of life. A promising solution is to enable the elderly to be more active in their own homes, or nearby locations, by facilitating their adoption of new ways to occupy their time. Surveys indicate that most elderly prefer not to move to day care centres and institutions of that kind, suggesting that providing them with activities that can keep them active will be well received by them and have a significant impact in their well-being (Malanowski, 2008).

Elders are a huge value for society, they boast numerous features such as knowledge, experience and wisdom. They represent an invaluable value for youth, especially in today's times where too often and overly easy to forget real values. Elder is a figure who lends itself optimally to various forms of volunteering since he has a number of precious resources, one particularly important: time.

While on the one hand the elder has a lot to offer to society, the latter can also return their favour by undertaking their diverse needs. In this sense, helping them to fight that feeling of solitude and depression that is increasingly established in retirees living in this technologically evolved society that only a little belongs to them. Sometimes it is enough to give them the word, the affection and the companionship.



Figure 1 – TSBank project logo

For this reason, TSBank project aims to allow senior people to remain active into society, giving them the opportunity to use their time and knowledge to help and assist others with volunteering activities or advices. In this way, not only can the elderly use their skills in a constructive way for society but will empower themselves in terms of social capital.

2. The Solution

The basic concept of the TSBank project is to give elderly people the opportunity to use their time and knowledge in an advantageous way to society, enabling them to be active contributing to their wellbeing and quality of life. To this end, TSBank is developing an online platform that allows seniors to share their own skills and personal experiences in the form of volunteering activities or advices. People looking for volunteering services or advices can thus consult the platform by making direct contact with older volunteers offering services tailored to the different needs.

Benefits for the demand side are many, first the users may access many services at a lower price than the competition, mainly because the person performing the service is a volunteer. Secondly, both actors (volunteers/beneficiaries) enrich their social capital by strengthening the relationship between society and senior population.

The service offered by TS Bank is a solution to many issues present within the society. Nowadays there are more and more people who reach the retirement age in good health and want to remain active even after

the end of their professional career. By offering this opportunity, the solution fights the loneliness, as new links are often difficult to create at a certain age.

TSBank is also promoting intercultural exchanges by connecting people of different countries or cultures and therefore encourage a more active role into society.

3. Services

The platform silverskills gives the elderly a way to use their time and skills in a way that is useful to society, using digital technologies as a tool to promote the social awareness and an enabler for social engagement.



Figure 2 – silverskills poster

The web based application – silverskills, available as a prototype at www.silverskills.eu – is being developed, including two main types of volunteering actions: the hands-on experience “just do it” and the advisor experience “I’ll tell you”. In these two areas TSBank would start offering three categories of services described below. The figure below shows the structure of the platform, offering a first choice to differentiate services of activities (experiences) from services of consultancy.

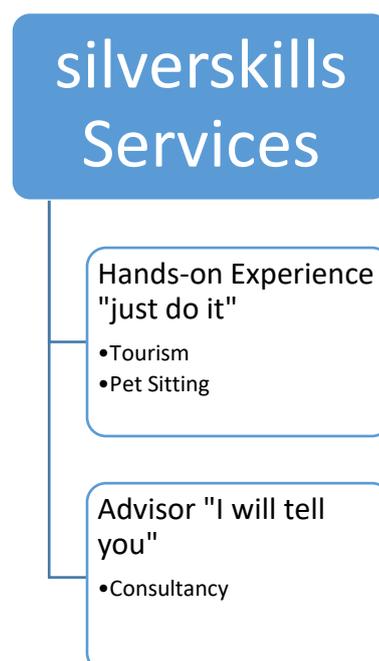


Figure 3 – Services available in silverskills

The opinion of past users experiences is important for them to know about the volunteer and have a feeling of the quality of the service provided.

Therefore, the registered user has to choose first between Hands-on experience “Just do it” and Advisor “I’ll tell you” (this is the consultancy category). After the first step the selection goes on with the choice of specific need: tourist guide or pet sitting performer as outside activities by older adults with experience or keen connection on this two areas. On the platform, the services available are presented in three major categories: Consulting, Tourism and Pet Sitting.

2.1 Consulting

This category will allow the public on demand to access a consulting service from a passionate or experienced elderly in a given field, who might be available to offer advices on a variety of topics requested by the individual.

A clear example might be that of a mother who needs math repetitions for her son and looking inside the platform finds the senior volunteer who is registered in silverskills. Later, he is contacted to perform this type of consultancy. Another examples of consultancy can be practical information about tourism or cooking.

2.2 Tourism

The individuals registered in silverskills may wish to take a family walk but do not know well the route, or would like to visit a touristic place on that specific location. In this case, the older adults who know the region as the back of their hands, may indicate the path or a place most suited to their needs, the steps to go and perhaps where to stop in order to consume some local specialties.

2.3 Pet Sitting

Nowadays people are increasingly engaged and sometimes they have no time for their pets. This service is a good alternative to animal shelter in case of absence for work or holiday. For this matter, the older adults can occupy their time by taking care, or even training the pet of individuals who will be unavailable for a certain period of time to be around their special friends.

4. Technology

The platform serves as a starting point for self-confidence in the use of ICT tools through the use of perception of knowledge and experience transfer become visible in local communities, boosting elderly acceptance and perceived value of ICT solutions. These social benefits are supported by a group of technological features:

- Web apps development using responsive web design technologies that allow to access the platform from different mobile devices;
- Follow usability and accessibility standards, especially for older adults;
- A Brokerage Matching Platform between skills’ offer and demand;
- A chat promoting the interaction on ICT and ease the process of decision making;
- Trustful Rating System - offering the users on demand and offer sides the possibility to rate mutually their experience;
- Gamification – attribution of virtual awards to encourage the older adults for keeping their enthusiasm during their experience with the platform;
- A trustful platform for the users and a secured system to their respective data.

The solution was developed in collaboration with older adults available from the beginning of the project up to the final phase of pilot testing. Initially the idea was proposed to confirm the need, to define the technical requirements and also the target users. At a later stage, users were invited to actively participate in the pilot testing on using the platform directly by interacting with other users and manage their profile and services.

Two pilot locations in Switzerland and Romania, are targeting a total number of 90 primary end users – self-sufficient male and female people aged over 65 – as well as 40 secondary end users – volunteers, organisations, people at any age needing a kind of help that can be provided by an older person. From the initial concept there were some additional features and processes which were improved considering the end-users feedback, including: possibility to the user select which own profile information should be private or public; an improved algorithm for matching users considering the older adults enriched profile regarding their expertise; online notifications on the platform to easier manage their own services; possibility to lock and unlock the account considering the availability to participate on answering and completing services; accessibility standards are being followed to access the information on changing the context letter size and a function to apply the grayscale view; and at last a refreshed interface for improving the usability and to seek a more attractiveness and to simplify users' tasks during their navigation.

5. Values

The value proposition expresses advantages and particularities through various contexts such as economic, functional, emotional and symbolic.

silverskills is much more than just a brokerage or matchmaking platform. The positive side impact is the involvement of elderly people in useful volunteering activity contributing to increase their active role.

Part of new connections generated thanks to the matchmaking platform will be between people of different cultures and ages. We can therefore point out the intercultural and intergenerational value of the product in development.

Another value proposition of TS Bank is the modularity, so we may be able to enlarge our offer with new services after serious evaluation of the initial categories (tourism, sitting and consultancy). The values that identifies the TSBank project embraces the use of ICT from the older age population benefiting the society from the use of their knowledge and experience, including:

- Promotion of intercultural and intergenerational exchanges between people of different cultures
- Increasing older adults' inclusion, agency and a sense of belonging in society;
- Enabling knowledge transfer from a group of wide experience persons becoming available to benefit from the access to silverskills platform;
- Valuing elderly individuals lead to social and community benefits and reducing age gap;
- Designing technology tailored for elderly citizens' use and well-being.

6. Product definition

The prototype evaluation has been a continuous process during the pilot trials. The competitive advantages of silverskills platform are listed below:

- Promotion on the active ageing, by creating more awareness on this issue, improving the life quality of the older adults through the offer on spending their time using their knowledge at their most preferable set of areas. The informal caregivers will also benefit from this actions, by knowing that their friends or family relatives are occupied performing tasks of their interest.

- Usability and Accessibility standards to be used by elderly people as they are the primary end-users. Technical considerations were taken in order to the content could be read and interpreted easily, having also online guidance to be considered an easy and user friendly;

- Security (protocol and possibility to hide user information for keeping anonymity is a feature that complies with the end-user requirements collection.

- Continuous monitoring of the pilot activities in Switzerland and Romania, the platform evaluation and its improvement process has been benefiting from the testing of both primary and secondary users, collecting important suggestions in terms of security, usability, accessibility, content and even functionalities.

7. Strategy to Market

The silverskills platform is built upon the concept of helping the elderly help others, in the process improving their self-esteem and social engagement, which in turn improves their wellbeing. The solution differs from other similar product in that it is focused on the elderly and their volunteer work, allowing to have a greatly simplified interface and more efficient match-making capabilities. Volunteers are encouraged to enrol in silverskills through elderly associations that will directly benefit from a percentage of the revenue stream of the platform. This social impact which TSBank aims and promotes will be the endeavour for the revenue streams, through the promotion of the solution and project objectives next to the different approaches to institutions – government municipalities and elderly home care. The exploitation aims to create relevant partnerships with institutions related with the services available on the platform to create valuable partnerships (institutions that can be identified with the project vision of TSBank) and also institutions to support primary end-users recruitment to enrol on the platform. In order to give achieve a more matured platform, initiatives to extend the pilot operations and the search for new opportunities will be targeted.

The target market of silverskills are institutions – which can be both private and public organisations – that can establish partnerships with the product owners of silverskills and to mutually beneficiate from the availability of this solution. This solution, with the areas of Consultancy, Pet Sitting and Tourism, can be a value generator for institutions which operates under these areas, or that somehow are correlated and responsible on the older adults' active aging. The initial phase of exploitation plan is to create partnerships and attract and involve sponsors in order to enrich the database with experienced older adults and also apply the revenue from these to control the initial costs of the maintenance and promotion of the solution (as both requires a great effort since the first steps on the route to market). The route to market will also passes through contacting organisations to create partnerships by promoting their activities on the both website and the platform demonstration. These partnerships will be important for the revenue streams but also for the external services which can give a support for the activities and also for reattributing the effort of the most committed older adults.

8. Expected impacts

There are particular impacts on which TSBank project is aiming to create on the older adults' quality of life with an active ageing promotion, including:

- Improvement on the quality of life of the participant elderly by giving them a way to help others and use their time productively, which will increase their happiness and self-esteem.
- Promote intercultural and intergenerational exchanges between people of different cultures.
- Increase inclusion, agency and a sense of belonging of older adults in society;
- Enable knowledge transfer making the elderly feel part of the social community and also a sense of good feeling with themselves;
- Empowering elderly individuals to promote them to co-lead the process of improving social and community benefits and reducing the negative effect of the age gap;
- Creation of a healthy competition between the older age individuals will increase significantly their activeness, as well their well-being on keeping an active and less monotonous routine on their daily life.
- Brings a greater feeling of peace of mind and well-being to the older age's relatives due to the fact that these will be busy and entertained on completing their activities.

9. Conclusion

TSBank project has a special focus on promoting the exceptional value that older adults can offer to society. The accumulated experience and particular knowledge that only the elderly can have on a wide set of areas can be putted into practice and shared to whom can be interested. The awareness for the active ageing is well promoted by silverskills platform, making the match between the demand side on looking either for practical activities on tourism or pet sitting, or looking for advices on a particular area. These services are the

started point for the service categories, with the possibility and interest to expand to different categories, embracing more hidden knowledge to become available to a wider number of individuals who are looking for a particular support.

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