

Chapter 2

Silver Age Innovators: A New Approach to Old Users

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Abstract When designing innovations for the silver age, it is not sufficient to discover old people's needs only. In addition, one also has to discover old peoples' new roles as consumers, citizens and innovators. Since these are people who until recently have been given few opportunities to make their voices heard, there is a need for methods that identify their needs and demands. More importantly, we need to study and use methods that reveal the sources of innovations behind their expressed problems and lifelong habits as users of technology. Three attempts to identify old people's needs and demands by involving them in the design process are presented, drawn from design projects implemented in Sweden from 2005 to 2009. One project explores how the furniture market can be opened to new segments of older consumers. Another project concerns the development of services. The third project links older people's lifelong habit of watching TV to the development of communication via the television medium. The results were analyzed from two points of view: How do we recognise a need that can be explored in design? When discovered, how do we know that this is a worthwhile need to explore? The first attempt shows that older people can present needs as active users with expressed and specific demands; the second attempt shows that older users can have a need to support the solution to problems which are not yet expressed and activated; and the third attempt shows them as users with latent needs that originate from their lifelong experiences, and needs to keep up with daily routines.

Introduction

This chapter deals with older people as innovators; specifically, the way older people's experiences are important for innovations and design in general. Many view ageing populations as constituting a growing segment with specific needs, and understand ageing as a process having no value for any other age group other than their own. With the exception of the concept of "design for all" and "universal

design” it is rare for older people to be described as resources having value to people of all ages. Old people are defined by factors such as age, social loss, physical impairment and technical illiteracy, and ascribed roles as patients, care receivers, users of assistive technologies and subject to other measures, while other kinds of experiences and competences have been neglected. Far too little attention has been focused on older people’s capacity for innovation, and on how their life experience can contribute to the development and redevelopment of products and technologies. However, it is insufficient to simply talk about old people or to categorize them in accordance with what we already assume. We need to talk *with* them.

I will describe three different ways to explore old people’s needs and demands, based on how accessible they are. The conclusions are drawn from projects to promote and develop products and services for older consumers in Sweden during 2005–2009. One of the main reasons why their experiences are of topical importance is that modern ageing presents new demands. In addition, older generations wish to make their voices heard not only as patients or care receivers but also as citizens and consumers. Another reason is that we actually lack sufficient knowledge when developing innovations. We know enough to continue in the direction of the arrow, but this knowledge is insufficient for creating new markets. At best, present trajectories reinforce already existing markets and existing images of older people.

Often, the interpretation of their preferences does not rest with the elderly themselves, but with those who exercise care for the elderly. A stereotype is that older people are unfamiliar with or even fearful of new technologies. It is easy to forget that their long experiences with technical change and technological development make them the most experienced technology users in society today. While they may not know about the very latest innovations, they definitely have lived with and experienced many innovations that they have had to consider and make decisions about [1]. There is a gap between what we *think* they want on one hand, and what they actually ask for or how they want to be treated on the other. Consequently, innovations for the silver age will require a different approach than simply projecting the needs of older persons. Rather, silver age innovations must be based on discovering how older persons function in their new roles as consumers, citizens and innovators.

Old People and Innovations

By “innovations” I mean new ways of doing things in methods, products or services. When something innovative is fairly defined, the design process takes off. This chapter deals with both the innovation process and the design process. Usually old people, as well as people in general, have been allowed to step in at certain stages predefined by engineers, designers or researchers. A design process can consist of three stages: preparatory work with an analysis of a problem; second, synthesis and visualization creating a prototype which is tested and modified; and

third, evaluation with follow-up of the results. Most often, the second phase is where users get the chance to influence the process by being test persons. It is well-known that users in general can be a significant source of innovation [2, 3]. When it comes to old people's role in the design process, unfortunately that is not the case. What then is the point in letting them contribute more substantially?

The value of integrating life-experienced people into the design process is that their experiences, needs, and knowledge of them correspond to the demands put on successful innovation and design processes. According to innovation researchers such as Michael Porter, successful innovation processes are characterized by customers or users who present intractable problems, have high requirements, offer resistance, but still have the patience to stay on [4]. This is exactly what older people can contribute, as they are life-experienced, pragmatic and trustworthy. A growing selection of creative examples can be found such as the experience automat developed in Japan in cooperation between designers at Kyushu University and the company RICOH. The automat is used to find relevant experiences among recently retired colleagues when the company establishes new plants. A younger colleague involved in plant design should always accompany an older colleague.

When the ageing and design programme became a priority at the Institution for Design Sciences at Lund University in Sweden 2004, the main aim was to understand the expectations of today's older generations, and develop methods that avoided stereotypes. The cooperation with companies and public health care organizations made it possible to apply our results, and contribute to the development of products and services.

When the outcome and implementation process was analyzed, we were able to observe different stages of awareness among the users and the possibility of supporting older persons' articulation of their needs and demands. To identify these needs and demands requires different methods and a time span not usually found in most innovation studies. Older persons have demands and needs that are quite observable, but they can also have what I call "inactive" or "latent" needs that can be revealed only by using specific methods. Thus, we get a third question, namely how can they participate? What methods are available to realize the ambition that innovations should be user-driven?

The methods used in these projects differ according to the users' awareness of their needs, i.e., their ability to express their demands and desires. In addition to interviews and focus groups, it is not always possible to obtain the needs or desires we are looking for as something independent of the individual who is the carrier. The only way to explore these needs and desires is to involve older persons in the innovation or design process. The concept "sticky information" suggest that it is not always possible to separate needs from the owner, and gives a taste of how closely the user and the knowledge of their needs can be related [5].

Another prerequisite is the fact that older people are divided into different segments. Consequently, their needs cannot be generalized to fit the needs of all the elderly population. They constitute a heterogeneous group, which also applies to their demands and preferences. However, the way they are culturally defined gives them experiences of ageing in modern society that sometimes overshadow

their differences. Some of these experiences have a bearing on them as consumers, such as the experience of being retired and excluded from the possibility to catch up with technological developments, societal discrimination in general, generational values shaped by certain events, and the experience of being the oldest [1, 6].

Users with Active Needs in the PLUS Furniture Project

The development of the Swedish wood processing and furniture industry with user-oriented and competitive PLUS products was a project conducted between 2008 and 2010. The aim was to explore the demands of a new ageing population market segment by testing defined PLUS values in furniture: functionality, elegance and durability. The project was conducted by the Department of Design Sciences at Lund University and the Engineering Department at Linköping University in cooperation with seven Swedish furniture producers: Lammhults, Swedese, Nelo, Allinwood, Stolab, NC Möbler, and OH Sjögren. The project managers were Britt Östlund and Elisabeth Dalholm Hornyanszky. Thirty persons were involved, between 57 and 87 years old. The main outcome was the identification of user requirement specifications for the companies that could be used in meeting the needs and demands of the new market segment of older consumers.

The purpose of the project was to respond to the apparent lack of a specific product serving what was an obvious demand. The aim of the project was to develop criteria for a product group of furniture serving older consumers. The idea actually was raised by a furniture dealer who observed that he had met a new group of consumers for whom he did not have an appropriate selection of furniture. Earlier, the situation was that when someone came into the store to buy furniture for the elderly, it was a person from a retirement home which would act on older persons' behalf. The furniture that was designed for older people was usually functional, but not particularly attractive. It was certainly not the sort of furniture that you wanted in your home.

Today, older individuals are coming directly into stores by themselves to purchase furniture for their own homes. They are also known as being in the third age, unlike those in the fourth age, who are elderly with a need for daily care [7]. When third age consumers enter furniture stores they cannot find what they are looking for. Considering their lifelong experience with being furniture users, the PLUS furniture project decided to provide the woodfurniture industry with criteria that have a bearing on three aspects: functionality, elegance and durability.

Expressed Demands To Be Designed

To get the most realistic picture as possible, the researchers chose subjects who were about to move from their present home to something smaller or to senior

housing. The methods used to identify demands were pretty much straightforward. Focus group interviews were followed up by individual interviews with people already living in a kind of retirement home. In order to visualize the demands, and make them more relevant for design and production, two visualizations took place and some mock-ups were developed. One company also built its own prototype that was tested at a furniture fair. Moreover, the companies were asked to pick out a number of chairs that they assumed already had PLUS values. These chairs were tested and commented upon by the sample of users [8, 9].

The older persons studied were identified as relevant users because they were on their way to change their furniture at home and identified what they were actually looking for to be a problem. The results from this project are now being followed up by the companies, who will integrate the PLUS criteria into their designs for new products or into the development of already existing products.

The results of these studies have led to an understanding of how users experience potential PLUS values in chairs – functionality, elegance and durability. These values are supposed to work as leading demands coming from a new segment in the market, and help companies to formulate their own more specific description characteristics, i.e., user requirement specifications in terms that they can use in their continuing efforts to develop PLUS furniture.

Users with Not Yet Activated Needs Looking for Support

The project Business Solutions for Local Support in the Third Age was carried out during the period 2005–2007. The goal of this project was to explore the needs and demands for services among people in the third age who wanted to remain living in their own neighborhood despite growing old. The project was established by the Department of Design Sciences at Lund University in cooperation with the Swedish Church, the parish of Adolf Fredrik in the city of Stockholm. The project manager was Britt Östlund. One hundred and five persons 60–99 years old were involved in interviews during 2005. Twenty-one women 63–88 years old participated in this project during 2006 and 2007, which identified the need for new services for people in the third age.

The main outcome was the development of a model revealing that existing services mainly focus on the needs of the fourth age, and was heavily influenced by donors' service perspective, and the alternative characteristics of services asked for by people in the third age.

The most challenging way to grasp old people's needs and demands is to enable those who have knowledge and experience not yet expressed – inactive needs. Not that the users themselves are inactive as opposed to active; it is that their needs and demands that are not yet activated. Like those with active needs, old persons have a need for support for something they want to do or realize in their lives, but it is not necessarily specified. Their needs are expressed in terms of problems rather than as a demand for specific products or services. At the same time, they are more

pragmatic than they were earlier in life. The challenge when taking on users with inactive needs occurs when addressing actions to solve their problems or giving them the tools to do that. Older persons are on the edge of articulating their demands, and need a push to go forward.

The purpose of one project that we undertook in the city of Stockholm in the period 2005–2008 was to develop services appropriate to retired persons belonging to the Church of Sweden in the parish of Adolf Fredrik. It was pretty obvious to the church board that the old people in the parish were no longer attracted to the same activities they were one or two generations ago.

Demands To Be Realized

The project therefore needed to find out what the older people who wanted to participate in the project actually wanted to do, and what they lacked support for; and then it had to develop this specific support. The sample was again active people in the third age. The method used was research circles, which is a method open to active participation and which explicitly strives to change social practice [10]. Research circles are driven by the participants' will to achieve something, and includes a research interest to create both a new structure and the systematic development of knowledge. The strong emphasis on participation is in contrast to approaches aimed at group interventions to relieve loneliness or at training professionals to do things for older people [11]. The research circle instead involves doing things with them.

The research circles started by giving the participants the opportunity to describe the life they wanted to live in old age, the extent to which they wanted to increase their capacity, and what they were prepared to do themselves to improve their situation. The results revealed one main theme: living on my own terms – when housing for old people does not exist or is not attractive, what can we do then? The group decided to increase their social networks in the neighborhood in order to continue as residents in spite of ageing. But what kind of services could be developed from the tax-funded welfare system or from the commercial market that the older persons in the group were not able to satisfy by themselves?

Missing Markets

The result of their investigations identified a gap between the services their older neighbours were offered and the services they really needed. In fact, they have to live with the fact that they are categorized according to obsolete stereotypes of ageing, and have to cope with meeting their own demands by combining different solutions such as municipally-financed home help service, the private sector, the black market and assistance coming from relatives and friends. They realized that it

was not the old people's needs, but rather the service provider's priorities that governed the supply of help they could receive. Moreover, they concluded that the services available today primarily address people with fourth age needs who chiefly require help with household chores, not with services in general.

The type of service requested can be explained in terms of time and competence, not focusing on action but on time. Services for older people, for example in the form of help in the household, are usually packaged for any form of action involved. This segment asked for the possibility to buy time and use it optionally. One reason is that they often do not want to hand over the entire execution to someone else but be involved themselves. One example is the need to be helped to carry down the laundry to the laundry room, but to sort the laundry and choose the laundry programme themselves. The results also suggest the need for the public care sector to re-evaluate what they actually supply and better assess changes in demand. In addition, today people in the third age do not accept being passive recipients of services. They are ready to self-organize until they enter the fourth age.

To conclude, the research circles are, in spite of them being time-consuming, a way to discover hidden demands and to activate consumers. The worthwhile discovery in this project concerns services. Society provides services mainly built around the needs we have in the fourth age, and is heavily influenced by donors' service perspective. The third agers' demand for services is characterized by the need for continued independence and to be allowed to choose what they want help with. They are more pragmatic and more comfortable than before, and happy to let things go which in the past they took great pride in doing. In the third age, the user of a service wants to be the same person who decides about how that service is delivered, and to pay the service providers delivering the service or technical support systems. In the fourth age, the decisions and payment provision are often handed over to someone else to take care of.

Users with Latent Needs

The project: New Networks for Modern Ageing ran through 2008 and 2009 with the aim of supporting social networks for older people through interactive communication via their own TV through the use of mobile radio networks. The project was a joint adventure between Inview Inc. and the Department of Design Sciences at Lund University, where the new possibilities for technological convergence interacted with 10 years of research about old people's TV viewing.

The project took into consideration both the changing requirements of participation among the elderly, and the technological developments that now make it possible to develop interactive TV. Thirteen persons between 54 and 82 years old tested the prototype "ippi" at home, and contributed to the design process and the demarcation of future consumers. The result consists of a modified and improved product and knowledge of the usefulness of ippi problems for the owners, and the target group among the elderly that should be best helped by ippi. The result

indicated a general benefit to those who watch much television as well as those who combine ippi with the Internet and mobile telephony.

Innovation should focus on the old as well as the new. Lifelong habits are often not regarded as being innovative because the development of products and services for old consumers most often emphasizes novelties and revolutionary technologies. There is a window of opportunity to search for evolutionary innovations, however, based on learning from existing habits, including the use of technology deeply rooted in everyday routines. Many needs that can shape technology which were previously undisclosed can be recognized when users are granted priority in interpreting and defining their needs and can be more actively involved in defining them. A key element in this discovery process depends on a competence to identify patterns in daily life. These patterns consist of many years of well-established and integrated habits and routines. The fact is that research about the use of technology in everyday life teaches us very clearly that lifelong habits affect the way we approach new technologies. Not least, technologies are part of the constitution of everyday life, and as such are embedded into social relations and into experiences of safety and familiarity.

In one of the projects, old people's lifelong habit of TV viewing was discovered as a source for innovations. Statistics show that old people watch TV to a greater extent than any other age group, and that TV viewing in the fourth age tends to be more individualized compared to earlier in life [12–14]. As such, TV viewing makes a significant contribution to the capacity to cope with disengagement in old age, and can be used as a way to promote communication and wellbeing [15]. Considering the extensive TV viewing among older people and TV viewing as a lifelong habit, why take a detour by relying only on mobile phones or the Internet to offer older people the opportunity to communicate more effectively? Why not build directly on everyday use of TV?

Evolutionary Innovations

Well, one company actually made use of TV as a more interactive communication opportunity. They developed a patent which allows the possibility of communication between a mobile telephone and a TV, or between the Internet and a TV. The name of the solution is ippi. With the help of a remote control, ippi makes it possible to communicate asynchronously by sending pictures or voice messages to and from the TV set at home. One question was whether familiarity with the TV, “the TV as metaphor,” could serve as a resource for promoting new technologies and developing services for old people.

We assumed that it could, and the extent to which it could proved to be confirmed beyond our expectations. Being able to watch the TV screen reduced the uncertainty for the participants and facilitated the initial use of the ippi. A simple installation required that each participant simply attach a SCART connector to the TV and plug the ippi into an outlet in the wall; this contributed even more

to increasing the desire to try the ippi. Most likely, initial difficulties in installation or use can quickly reduce users' motivation. This experiment shows that the absence of complications related to the installation of users decreased uncertainty about the new application.

But while the TV metaphor worked for attempting and wanting to try out the ippi, it did not contribute primarily to using the ippi on a daily basis. Rather, it was the access to a social context or a social network that determined the extent of usage. Consequently, the use of ippi, as in any other communication technology, was dependent on a social context. The use of ippi was also tied to daily user patterns that can be of use in developing innovations. Identifying such usages depended on the competence of trained researchers in being able to identify habits and routines, as these phenomena are fairly invisible when integrated in everyday life, and taken for granted as a part of life. The ability to locate these patterns is also based on the fact that technology is used and shaped in social contexts.

Three Types of Needs

A summary of these attempts to involve old people as users in design processes points to the fact that needs can be visible, hidden and even latent. The first attempt shows that older people can present specific demands in an active way. This needs to be interpreted as *active needs*, as they create a movement forward, but without a method of support.

As the second attempt shows, however, need can appear as problems as well as preferences or desires, which reminds us of the fact that just because a need is not formulated does not mean that a need does not exist. In the second attempt, older users have a need of support when solving problems which is not yet expressed and activated. As such, the needs are *not yet activated*. With appropriate support, older users can make their voice heard, and activate their needs to create innovative approaches and open new markets. This approach might be even more important considering the fact that the expectations among older people today regarding how they would like to spend the latter part of their life are changing. Modern ageing populations will hardly match stereotypes of what old people might need or prefer.

The third attempt shows older persons as users with *latent needs* that originate from their lifelong experiences, and the need to keep up with daily routines. Latent needs are dependent on someone else to see what experience they are charged with, and what habits and routines can be developed into services or products. Table 2.1 provides an overview over various user requirements and needs which are described, how they appear, and suggested methods for identifying them. Active needs are expressed as a demand for a specific product and service, and are characterized by the fact that there is a lack of supply of these products or services. However, general preferences or complaints or other kind of general comments (for example that "technology is a bad thing") should not be mixed up with what is worthwhile to explore as an actual need. Of course, a specific demand can be

Table 2.1 Three kinds of needs defined in terms of needs as active, not yet activated or latent, the way they appear, what should not be mixed up with needs worthwhile to explore, and suggested methods to reveal active, not yet activated and latent needs

	Active needs	Not yet activated needs	Latent needs
Expression	Demand for specific products or services	Need for support or social change	Charged with user experiences
How needs appear	Lack of supply	The presence of problems	Need for continuation of established habits and routines
False or incomplete ways to identify needs	General preferences	General complaints	Claims of lack of needs or experiences
Suggested methods to reveal needs	Surveys, focus groups and interviews	Research circles for social action	Scientifically trained personnel doing field work

waiting at the end of that road, but this is another process and much more time-consuming to identify, and the comments made by older persons on the surface should not be confused with their specific demands. While specific demands can be fairly demarcated, the suggested methods are pretty much straightforward. Focus groups are a good way both to broaden and limit the scope, followed by the use of surveys or interviews with closed or open-ended questions as well as interviews. Inactive needs are characterized by a need for support for something that the users want to do in life. This is most often associated with what needs to be changed, such as prejudices against old people that prevent them from being active citizens. Inactive needs are often expressed as problems rather than as needs or demands. However, focusing only on older persons' general complaints about things will not be sufficient for identifying the architecture of needs. Instead, you have to look at the will to engage in an active way to improve an actual life situation. For this reason, research circles are suggested as a method that encourages social action. Latent need users, on the other hand, require consent from the users but not necessarily an active engagement. They are walking containers, with mental mappings and experiences that are a goldmine for researchers, able to reveal habits and routines that can lead to innovations and make learning curves less steep.

There is still a lack of knowledge about the growing silver age market, which suffers from stereotypes where ageing is associated with something obsolete rather than with innovations. No company wants to be associated with decline. Discovering old people as innovators might be one way of increasing the business value of life experience. So, how possible is it to realise the suggested methods for market-dependent companies and entrepreneurs? It is true that identifying and developing user-driven products might seem to be time-consuming. On the other hand, older users get a lot out of projects that identify their needs, and often want to participate in such projects over an ongoing period. Entrepreneurs and innovators having technical knowledge should also consider fund-raising together with academics and problem owners, since it is well-known today that innovation systems are not a

result of isolated initiatives but of networks and cooperation linking various kinds of knowledge.

Summary and Conclusions

To conclude, this chapter suggests that exploring old people's needs and demands is about defining the appropriate method. Old people's needs are not absent just because they are not visible. Expressed demands are easy to identify, but also problems and hidden abilities can become sources of innovations. The first attempt presented in this chapter shows that older people can present specific demands in an active way, interpreted as *active needs* in demand for new PLUS criteria for furniture. However, as the second attempt shows, needs can appear as problems as well as preferences or desires for not yet existing services. As such the needs are *not yet activated*. The third attempt shows them as users with a *latent need* hidden in lifelong experiences such as TV viewing. The discovery of latent needs is dependent on someone who has an eye for hidden patterns and routines that can be developed into services or products. Applying this discovery process can contribute to the development of new markets which might emancipate old people to become active consumers and citizens, and also contribute to the development of innovations in general. Not least, a new approach to old users will contribute new business opportunities for industry.

References

1. B. Östlund, Design Paradigms and Misunderstood Technology: The Case of Older Users, in *Young Technologies in Old Hands – An International View on Senior Citizen's Utilization of ICT*, ed. by B. Jeager (DJØF Publishing, Copenhagen, 2005)
2. C. Raasch, C. Herstatt, P. Lock, The dynamics of user innovation: Drivers and impediments of innovation activities. *Int. J. Innovat. Manage.* **12**(3), 377–398 (2008)
3. C. Herstatt, E. von Hippel, From experience: Developing new product concepts via the lead user method. *J. Product Innov. Manage.* **9**(3), 213–222 (1992)
4. M.E. Porter, *The Competitive Advantage of Nations* (Free Press, New York, USA, 1998)
5. E. von Hippel, *Democratizing Innovation* (MIT, Cambridge, MA, USA, 2005)
6. B.S. Turner, Ageing and Generational Conflicts: a reply to Sarah Erwin. *Br. J. Sociol.* **49**(2), 299–304 (1998). London School of Economics, London
7. P. Laslett, *A Fresh Map of Life. The Emergence of the Third Age* (Harvard University Press, Cambridge, MA, USA, 1991)
8. O. Jonsson, Hur kan personer i “den tredje åldern” involveras i projektet PLUS-produkter för att skapa ny kunskap och bättre design av möbler? [How to involve people in “the third age” in the project PLUS-products to improve knowledge and design of furnitures?] Examination paper, Karlstad University Sweden, 2009
9. O. Jonsson, E. Dahlbom, L. Sperling, Användares upplevelser av Plusvärden hos sittmöbler. [Users' experiences of plus values implemented into furniture]. Project Report (Department of Design Sciences, Lund University, Sweden, 2010)

10. B. Östlund, The revival of research circles: to meet the needs of modern ageing and the third age. *Educ. Gerontol.* **34**(4), 255–266 (2008)
11. K.H. Pitkala, L. Blomquist, P. Routasalo, M. Saarenheimo, E. Karvinen, U. Oikarinen, T. Mantyranta, Leading groups of older people: A description and evaluation of the education of professionals. *Educ. Gerontol.* **30**, 821–833 (2004)
12. J.D. Robinson, T. Skill, Media usage patterns and portrayals of the elderly, in *Handbook of Communication and Aging Research*, ed. by J.F. Nussbaum, J. Coupland (Lawrence Erlbaum Associates, New Jersey, USA, 1995), pp. 359–91
13. G. Häggblom-Kronlöf, U. Sonn, Interests that occupy 86-year-old persons living at home: associations with functional ability, self-rated health and sociodemographic characteristics. *Aust. Occup. Ther.* **J53**, 196–204 (2005)
14. Nordicom (2005) www.nordicom.gu.se/common/stat_xls/690_5520_daily_reach_sex_age_2004.xls. Accessed 22 Jan 2009
15. B. Östlund, Watching television in later life: a deeper understanding of TV viewing in the homes of old people and in geriatric care contexts. *Scand. J. Caring Sci.* **23**(4), 623–825 (2009)

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