Happy and independent at home

Paula van der Zande is an 88-year-old widow who lives happily and independently in the Hof van Strijp complex in Eindhoven. She spoke to Netcarity News about ageing, optimism and technology.

What does daily life consist of for you?
I live a very active and busy life. I take care of my son, who has a muscle wasting disease, and I read newspapers and books. My dog is getting old now and I keep mobile by taking him out for regular exercise.

How have you been involved with Netcarity?
I was involved at the very beginning when I was interviewed and I joined different focus groups. I have been consulted about how technology could help me to continue to live independently. My apartment is the test apartment for Netcarity.

Why did you get involved?
The development of technology to support us older people is very important. It is important to test technology properly before installing it and I want to play a role in that.

What do you think technology can do for older people?
Technology is important not just for delivering care, but also to help older people to live independently for as long as possible. I think it has a very important role to play in helping us to seek support when we experience problems.

What is your advice for developers of technology for older people?
I think it is important to consider all the solutions to problems first, and then to look at how the technology fits into the solution. It is not the solution on its own. It is very important to do good research first and to involve older people by asking what their needs and desires are.

How do you think older people adjust to new technologies?
It is hard to learn new technology. I have a new DVD and mobile phone but it’s not easy to learn how they work. Five years ago I learnt to use a computer but I’m now too busy to bother with it.

What is philosophy for a long and happy life?
Stay optimistic and find solutions to your own problems. And stay independent for as long as possible.

Successful ageing and better care services through technology

Mrs van der Zande enjoys keeping in touch with friends from her home in Eindhoven

Netcarity News is the newsletter of Netcarity (A networked multisensor system for elderly people: healthcare, safety and security in the home environment), an Integrated Project supported by the European Community under the Sixth Framework Programme (IST-2006-045508)

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From the editor

Netcarity’s objectives are to provide security, wellbeing, independence and confidence to older people living alone at home. We are doing this by understanding the relationship people have with technology and the role it can play in supporting successful ageing.

Technology offers new ways to make our homes and lives more comfortable and productive. Creative use of the Internet can help people feel more connected to their community and access assistance when they need it. This edition of Netcarity News reports on the development of technologies, including the Netcarity server and mobile, which will underpin services for older people at home.

We won’t be able to provide genuine support unless we consider their needs as well as the needs of carers and local authorities who deliver services to their communities. We have an interview with Luciano Malfre from the Autonomous Province of Trento in Italy, and a report about the creative workshops which canvassed the views of older Dutch users.

Our interviews and research show that the concerns of older people are no different from the rest of society. They want technology to provide services without intruding on their lives. This is what all Netcarity partners are working towards.

Rebecca Simpson
Technical Coordinator

Q&A with Luciano Malfre

Luciano Malfre heads the social policy division in Italy’s Autonomous Province of Trento (PAT). Also known as Trentino, the province raises its own tax and is responsible for many government services including education, healthcare and welfare. He spoke to Netcarity News about how the Netcarity philosophy is compatible with Trentino’s own funding and delivery of services.

What motivated PAT to get involved with Netcarity?
The Social Policy Division of PAT is a strategic partner in Netcarity alongside other provincial departments and the Bruno Kessler Foundation. Our involvement in Netcarity allows us to test activities that meet strategic guidelines the province is defining for the welfare sector. These include services for older people which take advantage of new opportunities offered by technology and telematics.

What other benefits does Netcarity bring to the province?
Netcarity helps to demonstrate that social policies can contribute to economic development. This principle is now included in a provincial law which acknowledges the potential of social policies in creating economic value and social cohesion. Netcarity demonstrates how new services delivered to homes can create important business opportunities for companies.

How do you see the Netcarity project developing?
Netcarity represents an important opportunity to strengthen the relationship between public institutions, research centres and business in the province.

“The electronic heart needs to beat fast to deliver services to the Netcarity house

The designer of the server at the heart of the Netcarity house discusses the challenges he faced to ensure services required by older people are delivered swiftly.

Zdenek Kouba and his team of three at CVUT Prague developed the server for Netcarity’s trial homes.

“The Netcarity house will enable older people to have a better level of service delivery. If they fall over, for example, a message is sent quickly to a service centre. The server is where these important messages are stored,” Kouba says.

A key challenge CVUT faced was to design a server with a fast response time. As the base of all electronic acquired knowledge about the Netcarity house, it needs to be robust in both design and information processing.

The prototype server will be used in trials with older users towards the end of 2009 in Netcarity test apartments in Eindhoven. In the longer term, Zdenek expects to collaborate with industry on the manufacture of the server, enabling a low-cost yet reliable system to serve an emerging mass market for technology designed around the needs of older people in their homes.

“Our work is about bringing technology to the older person and delivering services to the home. On a personal level, I have enjoyed working on Netcarity and have gained new experiences from this project,” Kouba says.

The Netcarity server will hold appropriate levels of detail about users and their service requirements. Aside from building a robust and fast processing server, CVUT has been committed to a server design which protects users’ privacy. Zdenek’s team, together with Kerlan in Spain, are working with the latest advances in technology to protect users’ privacy.

Ilse Bierhoff is a research project manager at Smart Homes. She studied in the Computer Interaction Department at the Eindhoven University of Technology and works on the use of smart home technology in the care and cure sector.

How one workshop user imagined a ‘doorkeeper’ to their home would look
Older people show creativity in design of technologies

Creative workshops run by Netcarity have given older people the opportunity to design technology and care services which best suit their particular needs.

Netcarity is pioneering an innovative approach to the development and application of technology for older people living at home – by inviting older users of technology to choose how it will work best for them. This has enabled a unique creative interaction between users and developers of technology and will help to guide the installation and evaluation of smart home technology.

Feedback from the workshops is now being used to develop guidelines that will enable the selection and development of the most appropriate technology-enabled services for older people.

In April 2008, Netcarity ran four workshops for 23 people in the Hof van Strijp complex in Eindhoven where many of its hundreds of trial homes are located. This followed a workshop by staff and volunteers from Smart Homes and SWE.

Residents were given scenarios and asked to use ordinary craft materials to make models of devices that they believed would be most useful. They were also asked to think about practical services which they would like to have.

The two-hour creative workshops demonstrated the value and benefit of putting users into the role of designer, says Ilse Bierhoff from Netcarity partner Smart Homes.

Massimo Zancanaro and his team of programmers, engineers, sociologists and designers at the Bruno Kessler Foundation (FBK) have worked with older people to create a prototype mobiTable – a carefully-designed piece of electronic furniture that will link older people and their carers, families and communities.

One of FBK’s main challenges was to design a simple interface, because the focus groups (see page 6) found Microsoft Windows applications were too complex for older people, says Zancanaro, head of research at i3, part of FBK, in Trento, Italy.

Uses for the mobiTable include ordering shopping, sending messages and greeting cards, booking reading sessions and trips with community groups and centres.

The 18-month design stage for the mobiTable prototype included design workshops and focus groups to assess the individual needs of older people. FBK’s researchers asked them to keep diaries on their day-to-day activities, which helped Zancanaro and his team to fully understand the emotional and physical needs of users.

Future research will enable the mobiTable to connect to the Netcarity server (see page 7), as well as sensors and actuators in their homes. This will link vital information about users’ daily needs to control centres and care workers.

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Another challenge is the design of future prototype tables that are more energy efficient.

FBK and Netcarity partners aim to trial the mobiTable with users for three months in Autumn 2009. The prototype mobiTables will be tested in older people’s own homes to evaluate how they help support and enhance their lives.

Zancanaro says FBK’s unique research and development, particularly the integration of hardware and touch screen technology, has placed trial users at the cutting edge of new technology and social care.

He predicts a bright future for the mobiTable and hopes to have it in production inside five years. Local companies all over Europe will be encouraged to support its manufacture, thus boosting local economies.

Creating a business case for the mobiTable

Massimo Zancanaro believes the mobiTable is a product that can be successfully mass-produced. “The cost of the unit is relatively expensive if it were on the market today. However, in the future, the cost of the technology and production will come down. We welcome future business opportunities for the mobiTable.”
Support for those who care

Technology can not only help older people to live longer at home – it helps to enable more efficient carers and services. Netcarity News spoke to an occupational therapist, a nurse and a care home administrator from Netcarity partner SVVE.

How do you see the role of technology in supporting older people?

Femke – older people want to stay at home as long as possible and technology can help to provide services which maintain their safety, daily wellbeing and continued inclusion in society. SVVE has identified a growing need for technology in the homes of older people living independently.

We would like to install technologies which make us more effective as carers without jeopardising people’s independence or privacy.

Petra – my personal vision of technology has changed. SVVE has a policy to use technology where it can help us to provide better care services, and our design of new complexes for independent living now anticipates what technologies may be installed in the future.

It is important to note that technology can help us to support people and provide services, but it will never replace personal care.

How have older people responded to the introduction of technology in care services?

Isabella – I’ve enjoyed seeing how curious older people are about the potential of technology, particularly when we involve them in the design of new systems to suit their particular needs.

Petra – When we first involved older people in Netcarity, they often said they were too old to learn about technology. But if we approach it sensitively, and give them confidence by involving them in the design of systems, they become willing to learn.

It’s been very rewarding to see people change their approach once they see how technology can enable their wellbeing, health and independence.

How has Netcarity changed its approach to technology for older people?

Petra – at the beginning of the project, our technical partners were not particularly aware of the needs of end users. Then we had a week-long workshop where scientists and technologists experienced life as an older person. Now they ask a lot more questions about what services the technology will enable and how it can be adjusted to suit user requirements.

What is your vision for the integration of technology with care services?

Isabella – technology is giving people the opportunity to live comfortably at home for as long as possible. That is a big change.

Petra – I think the integration of different technologies is going to become more and more important to the provision of services and support for older people living independently at home.

What impact has technology had on the care professions?

Isabella – With demographic trends meaning we will soon have a lot more older people, technology is becoming really essential to deliver a good quality of care. I also believe that the sophisticated and sensitive integration of technology with caring will attract more people into care professions. This is because technology makes care work more interesting and exciting, especially for younger people. There has traditionally not been enough emphasis on technology in nursing qualifications, but we are working with education authorities to add technology to the nursing curriculum.

Petra has worked for nine years at SVVE in Eindhoven. She has experience with old and young people as well as those with behavioural issues. Petra has been a full-time contributor to Netcarity for two years and helped to run a series of focus groups and interviews to evaluate the needs of older people as users of technology.

Isabella van den Bos-Buzwilli believes that technology is giving people the opportunity to live comfortably at home

Isabella is a service point administrator who handles daily enquiries and requests for personal care, housekeeping and domestic care. She also responds to emergency alarm calls and handyman service requests in care homes run by SVVE. She also offers care support to older people living independently in their own homes.

Petra Panis is a firm believer in better services for older people from advances in technology

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Femke de Jong wants technology and human interaction to enable better care for older users

Femke has been working for SVVE for eight years as a nurse and coordinator. She is currently a care consultant. She has assessed older people and their homes to identify issues that can be resolved through technology and other care interventions. She is the first point of contact for care and service questions from people living independently and she offers guidance on long-term complex care issues.
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How do you see the Netcarity project developing?
Netcarity represents an important opportunity to strengthen the relationship between public institutions, research centres and business in the province.

“Not only do we have valuable insights into how technology and devices can be developed around the needs of older people, this user centred approach to design has given the project a community of people who really feel included in the project,” she told Netcarity News.

“Our design specification for future devices is not being developed only by engineers, but by the users themselves.”

The scenarios presented to users were based around the Netcarity principles of inclusion, assistance, protection and health.

After the workshops the users were asked to share their ideas and explain their reasoning behind each design, ranging from screen size and ergonomics to colour contrast, distance between buttons and handles which make each device easier to hold.

Netcarity facilitators questioned each user during the process, which sometimes led to interesting changes in the design. One user, for example, had initially designed a device with a remote control but after a discussion they decided a touch screen would make the device easier to use.

“The creative workshops have definitely been a success. By changing the rules and turning users into developers we got a lot of very valuable information,” notes Petra Panis of SVVE, which helped run the workshops.

How one workshop user imagined a ‘doorkeeper’ to their home would look

Ilse Bierhoff is a research project manager at Smart Homes. She studied in the Computer Interaction Department at the Eindhoven University of Technology and works on the use of smart home technology in the care and cure sector.

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What is your advice for developers of technology for older people?
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What is philosophy for a long and happy life?
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