



# The 25 semi-finalists of the Nordic Independent Living Challenge

June - December 2015

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# Innovating for independent living

**The Nordic population is ageing, and the demand for innovative solutions and technologies for the elderly and disabled is increasing. To solve this challenge, we need to cooperate across borders and to engage with existing and new problem solvers.**

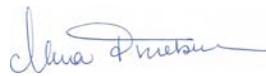
Today, elderly people represent 25 % of the entire Nordic adult population. This number will rise to more than 40 % in 2030 and 45 % in 2050. At the same time, between 13 and 21 % of the Nordic adult population report that they have some kind of disability. This means there will soon be a dramatic increase of people in need of solutions that can help them be able to keep living independently and increase their quality of life.

Through the Nordic Independent Living Challenge (2015-2016), the five Nordic capital cities and Nordic Innovation invited new and established innovators to come up with new solutions that can help the elderly and people with disabilities to live independently in their own home. The competition is an initiative to boost innovation and create a joint Nordic market in order to meet the challenges ahead. The participating teams were given opportunities for interaction with users, care workers and managers in the capital city administrations throughout the competition.

415 ideas and solutions were submitted when the competition launched in February 2015. This booklet proudly presents the 25 semi-finalists of the competition. From June to December 2015, they went through an extensive business support program in order to develop their solutions and companies.

We hope that their ideas and solutions will inspire you, and that several of them will be able to increase the quality of life of elderly and disabled in the Nordic countries and abroad.

On behalf of the five Nordic capital cities and Nordic Innovation,



**Mona Truelsen**

Project leader for the Nordic Independent Living Challenge



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# AbleOn ShowerSystem

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**Country:**

Norway

**AbleOn Shower System** facilitates the shower situation so that elderly and others with disabilities can feel safe and have more independence in their everyday lives. AbleOn is an ergonomic, modular system that grows with the user. It adapts easily to the users' needs, situation and environment to help increase mobility and safety throughout the shower routine. AbleOn follows the user from getting undressed and getting in to the shower, to taking the shower and out again, drying and dressing, thus contributing to increased independence, and dignity.

AbleOn also aims to facilitate for healthcare workers and family, and prevent work related injuries due to heavy lifting and unfortunate working positions. AbleOn can easily be placed and mounted in any home. The AbleOn team has done pre-pilot studies in private homes, nursing homes and assisted living homes and are working with partners to fit the product to the market. A full-scaled prototype is planned to be ready for user lab testing in January 2016.

Find out more at  
[www.ableon.com](http://www.ableon.com)



# Admone

**Project leader:**

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**Country:**

Denmark

**Admone** is a tool that helps people with dementia leave their home in a safe and controllable manner through self-activated reminders. The tool helps them to remember what they are supposed to do and what to bring with them, relieving them of stress and anxiety, as well as taking a load of relatives and care personnel.

Admone consists of a sensor and an application on a tablet all mounted on the wall near the exit door. When the sensor detects activity, it will activate personalised reminders suited for the day and they will be shown on the stationary tablet. A prototype of the solutions is now ready for initial testing, with the product planned to be ready for the market in spring 2016.



# AssiStep

**Project leader:**

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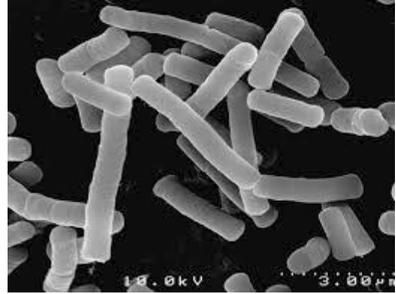
**Country:**

Norway

The **AssiStep** is a walker in the stairs, giving people with mobility issues extra support when climbing stairs. The AssiStep is a simple non-invasive product that can keep its users on their feet and climbing their stairs themselves, providing an alternative to stair lifts. With the AssiStep, more elderly can live at home and still get the best daily exercise we get in our own homes – climbing stairs.

The AssiStep consists simply of a conventional handrail with a handle coupled to it that users can slide in front of them to get safety and support while climbing stairs themselves. So far, AssiStep has been in use by three pilot customers with three more being added in December 2015. The solution will be tested further in 2016.

Find out more at  
[www.assistep.no](http://www.assistep.no)



# Biotherapeutics to accelerate wound healing in patients with diabetes

**Project leader:**

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**Country:**

Sweden

Wounds entail huge discomfort for everyone, even more so if large, painful and chronic. This is especially problematic for people with diabetes. The Biotherapeutics team are developing a band-aid containing a range of biotherapeutics (genetically modified probiotic bacteria) that accelerates healing of injured tissue.

The technology is unique and derives from decades of academic research. The team has demonstrated that the biotherapeutics accelerates healing of injured tissue through preclinical trials. The team is now developing a practical prototype in collaboration with clinicians and a manufacturer.



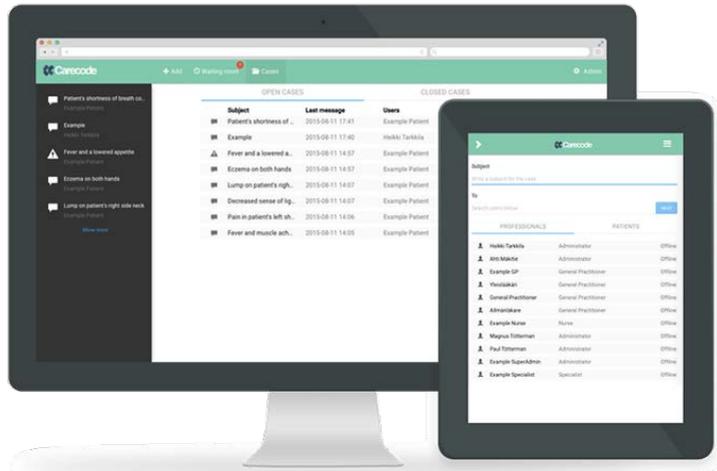
# BikeChair

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**Country:**  
Sweden

The **BikeChair** is a wheelchair powered by the user's legs or by a single leg, giving freedom to move for those who have a balance or coordination problem. The BikeChair helps them maintain an active lifestyle, serving simultaneously as transport and rehabilitation aid. The BikeChair is adjustable to fit different individuals and comes in two versions.

The BikeChair Rehab gives more support for e.g. stroke patients, while the BikeChair Fun is simpler and sportier for those less impaired. The Rehab version is ready to be tested, and the Fun version will be ready in February/March 2016. A manufacturing deal is already in place.



# Carecode Remote Care

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## Country:

Finland

Carecode helps healthcare organisations provide and manage remote care through a web-based communication software. The software lets frontline care personnel to communicate with each other, collaborate on patient cases and communicate with patients through messaging, forms, images and real-time video. The solution aims at improving access to health care,

enabling true collaboration between care professionals and reducing unnecessary hospital visits. From having one pilot customer in March 2015, Carecode now has 15 medium and large healthcare organisations as customers with a 20 percent month-on-month growth in users and revenue.

Find out more at [www.carecode.fi](http://www.carecode.fi).



## DAP Design



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DAP Design develops clothing solutions for people with disabilities, to enable them to dress unassisted. By redesigning people's existing wardrobes using simple add-ons, users can get any fashion label they want to fit their disability. People can get clothes of any label they like and have it adjusted to fit their disability by shipping the clothes to DAP Design. What they wear will be transformed from a functional compromise to a personal choice.

DAP Design solutions are designed by and for differently abled people, aiming for both B2C and B2B target groups. In 2015, DAP Design will complete their DIY DAP Collection and a B2C web shop. In 2016, they plan to test the B2C market in Copenhagen and run crowdfunding campaigns.

Find out more at [www.dapdesign.dk](http://www.dapdesign.dk)



# GazeDriver

**Project leader:**

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**Country:**

Denmark

**GazeDriver** is the world's first screenless eye control for wheelchairs, giving mobility to people that suffers from conditions that makes them unable to control a wheelchair with their body. It utilises technology that overcomes the so-called Midas touch syndrome eye tracking normally suffers from. As such, GazeDriver won't steer you against a danger you are looking at, it will only drive you in the direction you want to go. By removing the screen, you remove an obstacle from the user's sight, as well as lower the production cost.

GazeDriver is not tied to one wheelchair brand. It gives people mobility as well as dignity and control, while at the same time freeing up their helpers' time and mind. A prototype has already been tested with 14 users, with all of them being able to drive through an obstacle course with less than one minutes of instruction. GazeDriver is ready to test in real-life conditions in 2016.



HILLA

# Hilla Night Light System

**Project leader:**

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**Country:**

Finland

**Hilla** is a modular night light system for making homes safer. It is designed to illuminate the floor and obstacles without glare, helping the users move at night without being blinded or woken up too much. The smart lights are motion activated, rechargeable, and adjustable for individual needs. As many lights as needed can be added into the system and linked

together. Hilla can be used easily right out of the box without any experience in smart tech, or it can also be connected to a home automation solution, opening new lighting options for the owner.

Find out more at  
[www.hilla.launchrock.com](http://www.hilla.launchrock.com).



# Jobbr

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Norway

Many elderly want to live at home as long as possible, but reductions in both physical and cognitive abilities result in a need of help in accomplishing daily tasks. At the same time, students are constantly short on money and request flexible jobs in close proximity. Jobbr is an easy-to-manage online web platform that lets seniors book their own helpers. The service is an integrated service platform that provides a payment solution as well

as communication possibilities. In addition, the platform ensures trust through rating. In May 2015, an alpha version was launched in two local areas in Norway. In November 2015, a full-functioning beta version was launched in Trondheim. So far, the Jobbr team has recruited over 800 users resulting in 50 completed jobs through the platform.

Find out more at [www.jobbr.no](http://www.jobbr.no)

# Mimir

**Project leader:**

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**Country:**

Denmark

The product concept **Mimir** helps to solve one of the small, but important everyday challenges – to stay hydrated. For most people it is quite natural to drink water, but for many elderly people it can be a challenge to drink enough. The reasons can be many: most elderly people feel less thirst and some choose not to drink water to avoid going to the restroom too often. Furthermore, some simply just forget to drink water.

Our solution is to target the different challenges associated with getting elderly people to drink water – including dealing with the challenges remembering drinking. Mimir is about staying hydrated – one of the basic needs to live a good life.

For more information about the people behind Mimir, please visit [www.puls-cph.dk](http://www.puls-cph.dk).

**Mimir chose to withdraw from the competition before the finalists were chosen in December 2015.**



# MobiDent 1.0

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Finland

The **MobiDent 1.0** application is an e-health tool for home care nurses designed for promoting oral health and independence of the elderly people living at home. The development of MobiDent is based on research-based evidence and evidence-based practice and the project team is based at Helsinki Metropolia University of Applied Sciences. It includes sufficient and regular supported daily self-care, which also improves the psychological, physical and social wellbeing of a client with limited functional capacity.

MobiDent works as a real-time and visual e-health tool. It enables

home care nurses to assess, plan, implement and evaluate oral health care, and lets them consult oral health care professionals in real-time. In the future, the tool can be further developed to meet various oral health needs of hospital and hospice patients. Humanising the oral care and guidance of the elderly increases client satisfaction, self-direction and motivation. The aim is that oral care will become tightly integrated with the overall care of the elderly home care client.

MobiDent is ready for testing with the aim of making a functional prototype in autumn 2016.



# MOTview

## Project leader:

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## Country:

Norway



**MOTview** turns elderly people and people with dementia into dedicated athletes. Thanks to moving pictures and sound, the user can take a cycle trip through familiar surroundings and childhood memories. The system consists of a display unit that shows motivating videos, combined with a user-adapted exercise bike. The display unit provides access to a library of videos of locations throughout the Nordics that is constantly being updated.

highly recognisable, and are produced in response to customer requests and suggestions. MOTview brings memories back to life and inspires by providing the sensory impression of familiar environments. MOTview has produced more than 400 videos and have secured a music licencing deal, and plan to test the solution in nursing homes and day care centres across the Nordics in early 2016. MOTview has been implemented in almost 100 nursing homes in Norway.

The videos include elements that are

Find out more at [www.motitech.no](http://www.motitech.no).



# MultiPuff

**Project leader:**

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**Country:**

Norway

The **MultiPuff** is a device for assisting wound care treatment on legs, with the potential to cut personnel costs in half. Complex wound care treatment on legs require two care takers and is straining both for the nurse and the patient. MultiPuff elevates the patient's leg, providing full access to the patient's foot making the nurse able to perform the procedure unassisted.

It has a simple but inventive design based on the needs of both nurses and patients, making easy to carry around, maintain and clean and comfortable for the patient. The MultiPuff team has been testing an early prototype. The next prototype is ready for production, and the team needs funding for moving on to the testing phase.



# Navigation by Sound

## **Project leader:**

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## **Country:**

Sweden

**Navigation by Sound** is a visual aid helping the blind to see using only sound. The idea is to collect relevant information with sensors and present it through headphones to make surroundings hearable – much like how bats or dolphins use echo-location – in order to experience them without sight. Visually impaired people will thus be able to navigate known and unknown environments much more effortlessly – a great help in their everyday lives.

Navigation by Sound is still in an early development stage, but is envisioned as an attractive wearable device in the form of either a pair of glasses, a pair of headphones, or a combination, that will become an essential accessory for its users on the move. An early prototype has been made and a new sensor system is currently being investigated, which could enable real-life user testing.



## Nifty Neighbour (Nappi Naapuri)

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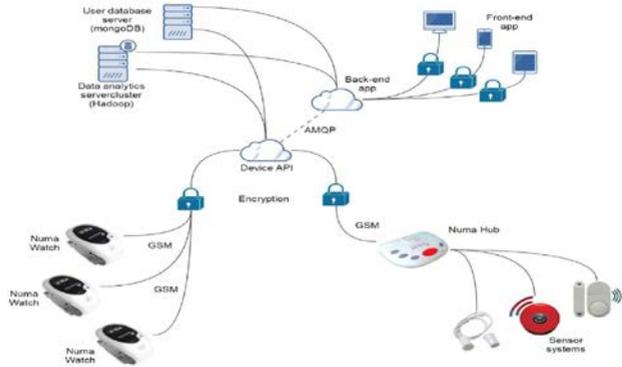
**Country:**

Finland

**Nifty Neighbour** is a new map-based social media for neighbourhoods. In Nifty Neighbour, anyone can offer or ask for help, look for friends, make an initiative or just start a discussion. It helps senior citizens to become an active neighbourhood resource, forming an ecosystem of care together with their neighbours and local organisations.

The design encourages into trusting, sharing, helping and doing things together. Nifty Neighbour has circa 3000 early users in Finland and the team has secured their first three clients. A beta version is currently in use, which is planned tested in Helsinki, Stockholm and Copenhagen.

Find out more at  
[www.nappinaapuri.fi](http://www.nappinaapuri.fi)



# NUMA SOS Rescue System

**Project leader:**

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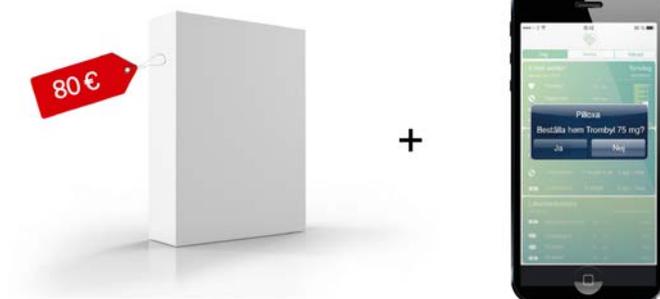
**Country:**

Norway

NUMA SOS Rescue System consists of a smart watch and an elderly alarm which can be used separately or together. Both devices have two-way voice communication abilities, enabling users to communicate directly with care personnel. Unlike other systems on the market, the smart watch uses GPS tracking and geofencing. This allows users to feel safe wherever they are – whether it is in their own homes or at the grocery store. The two devices work on a secure communication platform allowing for external event logging.

Together with the two-way voice communication ability, GPS tracking and geofencing, the NUMA SOS Rescue System provides users with safety and greater freedom of movement, and makes it easier for care personnel to prioritise and provide appropriate help. The solution, developed by NUMA Security System, is now ready for testing together with users and public health care institutions in Norway, Sweden, Denmark, Finland and Iceland.

Find out more at [www.numa.no](http://www.numa.no).



## Pilloxa

**Project leader:**

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**Country:**

Sweden

**Pilloxa** is a smart pillbox with a connected mobile app making it easier for active elderly to take medication. The box has visual reminders in the form of LEDs but is designed to be camouflaged, not giving an indication that the user relies on medicine. The app will give reminders when forgetting to take the right dose, keep an updated list of current medications

and the possibility to buy more medicine online when needed. The Pilloxa team have done surveys and in-depth interviews with end-users and relatives, and will finish making five technical working prototypes in December 2015 ready for testing in January 2016.

Find out more at [www.pilloxa.com](http://www.pilloxa.com).



# Postkasse 3.0

**Project leader:**

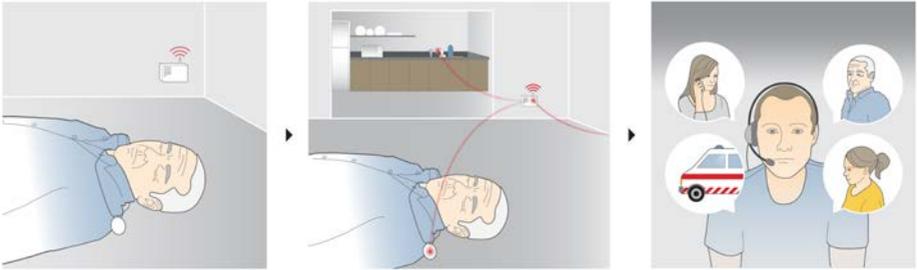
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**Country:**

Norway

**Postkasse 3.0** is a physical smart mailbox for elderly and disabled people who are unable to run daily errands. The mailbox can be used for delivering food, products or medical deliveries, includes temperature control and will have an ID control for access.

The box can monitor what you receive, when you receive it and the condition of the delivery. Users will get a personalised offer of deliveries that relieves the stress and dependency of others, while care personnel saves time and can focus on their core duties. Postkasse 3.0 will be tested in early 2016.



# Safe and Independent Living

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Iceland/Denmark

E21, Falck and Philips have developed a solution that combines intelligent sensors and software with alarm response and service design. The system uses predictive analysis to prevent incidents for enhanced safety, detects fall incidents and monitor water and power usage, enabling elderly and disabled people to live longer in their own homes. When living alone and loss of cognitive and physical functions is part of life, safety is prerequisite for quality of life.

The solution handles information about any incident, which is analysed and distributed to care personnel and relatives. The system can integrate other technologies like medicine dispensers, GPS gadgets and caretakers' logbooks. All alarms are handled by Falck. The system is ready for testing in real homes.

Find out more at [www.e21butler.com](http://www.e21butler.com).



## Siren Smart Socks

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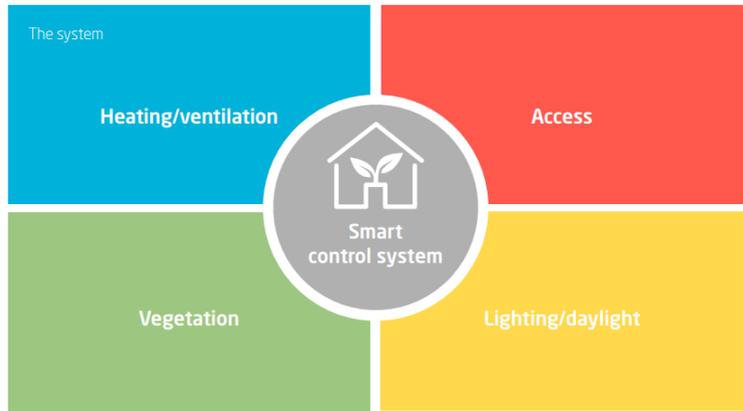
**Country:**

Denmark

**Siren Care** provides temperature-sensing socks to prevent diabetic foot ulcers, which is the leading complication that diabetics suffer from. Studies have shown that temperature monitoring decreases the probability of ulceration by up to 72 percent. While there are some temperature tracking technologies on the market, these technologies are unwieldy to use and require a significant investment of time and

disrupts regular routine. Since Siren Smart Socks is just like an everyday item of clothing, they are both familiar to the wearer and can be readily integrated into their daily life. Siren Care has currently developed their fourth iteration of prototypes, which are ready to be tested in a scientific study phase 1 in February 2016.

Find out more at [www.siren.care](http://www.siren.care)



# Thermal Winter Garden

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## Country:

Iceland

Most of us experience having family members living in elderly care homes at some point. Unfortunately, these facilities do not always provide optimal surroundings for the inhabitants. In these circumstances, the inhabitants may experience sleep disorders, depression and social isolation. Medication, with associated costs and side effects is a common solution to these problems.

The **Thermal Winter Garden** is a space for care homes that provides natural surroundings and daylight for those who cannot experience it outdoors. The stimulation and natural environment will positively affect the residents, reducing health problems and the need for medication. These positive effects will increase life quality and independent living for the residents.



# TravAble

## Project leader:

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## Country:

Iceland

**TravAble** is a free travel app offering real-time information about accessibility and services to wheelchair users in the Nordic countries based on their unique accessibility requirements, including them in society in a better way. The app utilises open data and crowdsourcing to enable easier travel planning and travelling on the go.

TravAble also reduces the need for direct assistance for wheelchair users and the burden on social services, and supports the tourism industry, especially in terms of accessible tourism. The first version of the app will be ready in May 2016.



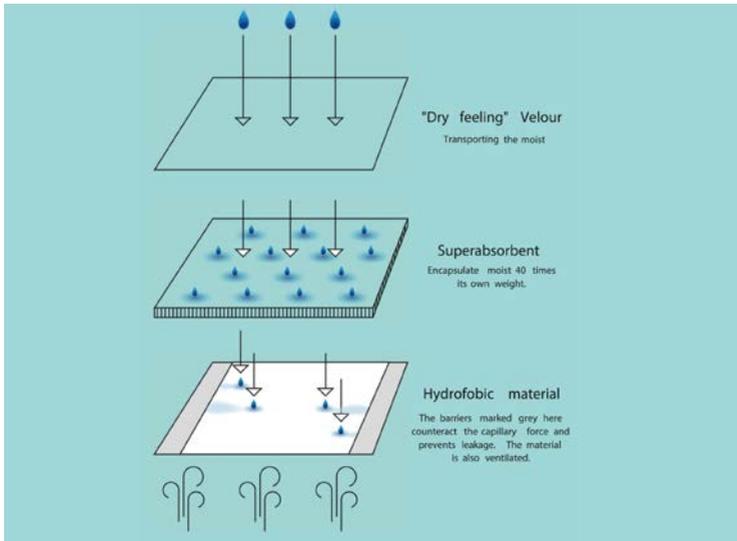
## Twist Shower Seat

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**Country:**  
Sweden

Many elderly people have problems with balance and coordination, and fear to fall when showering. Existing shower seat aids are often complicated to adjust and have an institutional and unattractive look. The **Twist** shower seat is user-friendly shower seat with a modern Nordic design. You adjust it by rotating the seat and lock it with a simple mechanism, making it easy to use both

for end-users and for care personnel or relatives. The attractive design and ease of use makes it applicable also in other parts of the home. A first prototype has already been made, with a second version resembling the final product planned to be ready by the end of 2015. This prototype will be tested with existing reference groups and partners in Sweden, as well as new groups in Norway and Denmark.



# Wundies

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## Country:

Sweden



50 percent of elderly women encounters problems with urinary leakage, which causes anxiety and loss of dignity. **Wundies** is a safe, stylish, washable panty providing dignity and control to those women. Wundies is unique in using capillary force to prevent leakage. The superabsorbent captures and retains moist 40 times its own weight and is the thinnest on the market, making

the panty comfortable compared to other products. Besides looking good, Wundies aims to provide women with urinary leakage the possibility to continue living active lives, to relax mentally and feel secure in any situation. Wundies is already on the market.

Find out more at [www.wundies.se](http://www.wundies.se)





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