



Alrek helseklynge, blokk D, 3rd floor  
Årstadveien 17, Bergen, Norway  
Phone: 0047 48094660  
E-mail: [bettina.husebo@uib.no](mailto:bettina.husebo@uib.no)  
Web : [www.uib.no/sefas](http://www.uib.no/sefas)



# BetterAge

Join us as partner in a Centre for Research-Based Innovation



[www.uib.no/sefas](http://www.uib.no/sefas)

**FIRSTLY**

# THANK YOU

**FOR CONSIDERING US!**

Chronic complex conditions including age-related neurological diseases pose one of the greatest challenges facing science and society. These older adults confront a future of progressive disability with treatments that are at best symptomatic. Many will end their lives in institutions where they do not wish to be and which society is finding increasingly difficult to finance. Demographic studies show that patient numbers will continue to grow, and older adults with complex conditions are increasingly constituting major challenges to health care provision in the 21st century. Our BetterAge project is a direct response to the Research Council of Norway's call for a Centre for Research-driven Innovation (SFI) for new insights on this most challenging issue. We will be submitting a proposal for this call in the fall of 2024.

We are seeking relevant and engaged partners for this project, to co-shape research goals and to deliver the envisioned project impacts. If you find this initiative of interest to you and your company, we will be happy to follow up with further conversations.

**Bettina Husebø**

Head of SEFAS





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**WE BUILD**

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# FUTURE CARE

Our society needs to prepare for an increasing number of elderly people. SEFAS is researching solutions, both when it comes to smart living and care, and detecting and preventing dementia and multimorbidity prior to their clinical manifestation. Care today is very costly, and loneliness is a threat. Self-management and independency should exist alongside social activities and healthcare services. We explore and use novel technology and smart buildings to innovate care and treatment for the elderly by sustainable business models, and look at how we can implement new scientific knowledge into action more effectively and efficiently. All the while with the safety and mental & physical wellbeing of our elderly at heart.

# 1 | OUR STORY

## ... SO FAR

SEFAS, the Centre for Elderly and Nursing Home Medicine, was established in 2012. Our vision is to provide outstanding interdisciplinary research, education, implementation and cooperation with a focus on home-dwelling older adults and nursinghome patients with complex conditions, on local, national and international levels.

## We are anchored at the UNIVERSITY OF BERGEN

**Our basic funding comes from the Norwegian government budget, and we have solid support from the University of Bergen (UiB), both on central, faculty and department level, through the Department of Global Public Health and Primary Care (IGS) and the Faculty of Medicine. We are also part of Norway's first Centre for Clinical Treatment Research on Neurological Diseases, Neuro-SysMed, focusing on the causes of neurological diseases (NDs) such as dementia, Parkinson's, MS and ALS. SEFAS is involved in Neuro-SysMed's Care and Dementia nodes.**

**SEFAS is headed by Professor Bettina Husebø, MD, PhD. Between 2019 and 2023, she was also the Head of Innovation at IGS. Her research focus is on care with a special focus on dementia, palliative medicine, pain assessment and management, impact of pain on behavioural disturbances in patients with dementia, psychometrics and algometry, sensing technology and smart housing. In 2023, she received an ERC Consolidator grant (5D-study) and a Trond Mohn Centre for Complex Conditions and Ageing (CC.AGE). In 2022, she was awarded with the prestigious Dementia Research Award from the National Association for Public Health, presented by King Harald. She is also in the Research Council of Norway's Portfolio Board for Health, providing strategic advice on research and innovation.**

**SEFAS' team counts 12 active researchers and counting, as innovative ideas have turned to projects and recruiting more excellent staff is ongoing. The team will thus be enlarged to more than 30 employees during 2024.**

## 2 | CURRENT PROJECTS

### STUDIES ARE THE BACKBONE OF OUR ACTIVITIES

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SEFAS runs several observational and interventional studies, some in collaboration with other centres. These described here are the studies relevant under the BetterAge concept.





## RELEVANT STUDIES

under the BetterAge umbrella

### ACTIVE AGEING

[Helgetun](#) (financed by the GC Rieber Foundation) is a smart senior collective or retirement community with 31 modern apartments for people who have chosen a mentally, socially, and physically active lifestyle in Sædalen (near Bergen). [ActiveAgeing](#) aims to document the benefits of an active old age life by using technologies that collect data passively, while the participants have their normal daily life.



### DARK. DEM

The [DARK.DEM study](#) (Virtual darkness and digital phenotyping in specialized and municipal dementia care) is a Research Council of Norway-funded project, using artificial intelligence to examine whether data from smart watches can provide accurate measures of agitation, depression and sleep disturbances in persons with dementia. It will also include a randomized controlled trial to determine whether treatment with virtual darkness, that is, light without blue wavelengths, can alleviate agitation and other behavioural changes among inpatients at the hospital.



### CC.AGE

[CC.AGE](#) (Complex Conditions and Ageing) is a Trond Mohn-financed centre aiming at developing a modular, digital plug-and-play mobile platform (ALIVE) with five components: core application, sensing devices, intervention modules, human-machine interface, and user apps, to improve the lives for older persons with complex conditions living at home.



### 5D

With financial support from the European Research Council (ERC), we will in the [5D-study](#) (Decoding Death and Dying in people with Dementia by Digital thanotyping) investigate how assistive technology can be used to recognize symptoms in people with dementia who are near the end of life. This will be of great importance to the patient and provide better pain management and symptom relief also for patients living at home. It will also improve communication with relatives and the different health services. Subprojects DIPH.DEM and ORAL.DEM (both funded by Helse Vest) are associated with the 5D-study and investigate activities and oral health in nursing home patients with dementia.



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## WHY A CENTRE FOR

# RESEARCH-DRIVEN INNOVATION?

## IT'S ALREADY IN OUR CORE

A Centre for Research-based Innovation (SFI) is a Research Council of Norway scheme to develop expertise that is important for innovation and value creation, in close cooperation with R&D-active companies to drive technology transfer, internationalisation and researcher training.

Our BetterAge project aim to:

**WORK FOR SAFE AGING**



We work to prepare the elderly for the 3rd phase of life, including the end of life, making the last years as comfortable and safe as possible.

**DO CUTTING-EDGE RESEARCH**



We will use novel technology, smart buildings and person-centred solutions to support independent, safe living for older adults, and maintain or improve their quality of life and for their families.

**DECREASE SOCIOECONOMIC COSTS**



One of our major concerns is finding solutions for the increasing economic burden of age-related diseases, as well as inspiring industry products with potential for export.

**SEEK INTERNATIONAL COLLABORATION**



We have established collaborations with excellent national and international research environments across Europe (COST-Action on NET4 Ageing) as well as with Harvard and Yale Universities, USA, and Tohoku University, Japan.

**PROVIDE EDUCATION AND TRAINING**



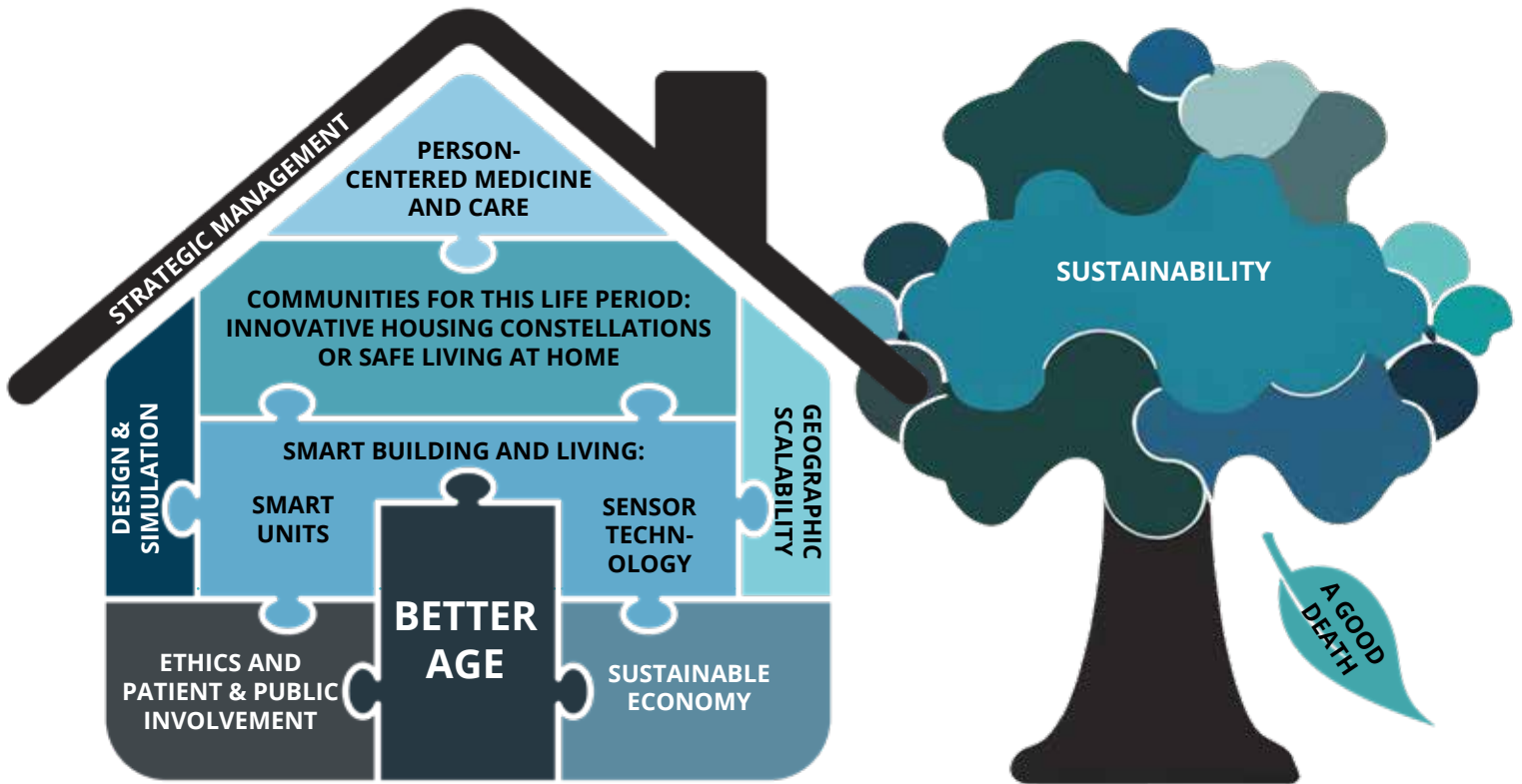
Our university profile facilitates Master- and PhD-level education and researcher training, already well implemented at our multidisciplinary centre.



# AMBITIONS

and relevant partner expertise

Together with industry partners and user involvement, we will work for:



## RELEVANT PARTNER EXPERTISE:

<b>BUILDING</b>	Construction of specialized senior homes and communities
<b>IN-BUILDING TECHNOLOGY</b>	Automation in apartments, mobile platform
<b>SENSOR TECHNOLOGY</b>	Medical sensor technology
<b>SUSTAINABILITY</b>	Cost predictions and sustainable solutions of electronic device waste, data storage...
<b>SOCIAL PLANNING</b>	Community planning, changing social behaviour patterns, scalability for different municipality types
<b>AVOID LONELINESS</b>	Mental, social and physical activities

# HEALTH SERVICES AND INDUSTRY

**... JOINT FORCES REACH FURTHER**

## **MULTIDISCIPLINARY PUBLIC INNOVATION AND KNOWLEDGE TRANSFORMATION**

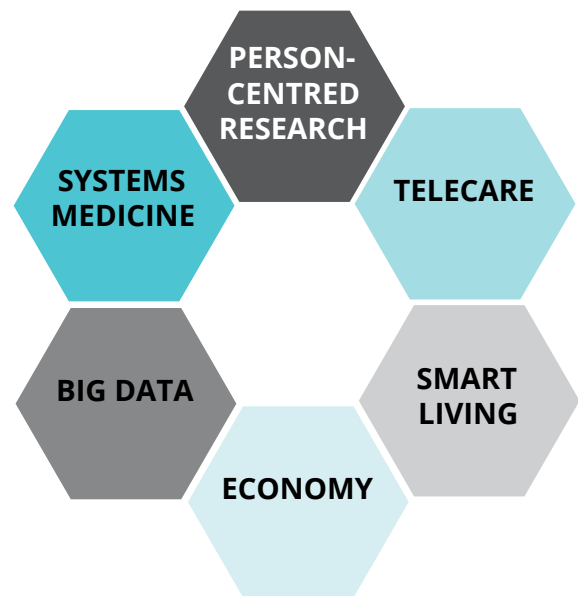
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We believe that innovation and collaboration with municipalities and the industry will be crucial to transform multidisciplinary knowledge into action that will ultimately benefit society at large.

# CROSS-DISCIPLINE EXPERTISE

and collaboration

BetterAge will combine disciplines across clinical, academic, public and industry environments.



We will draw on the cross-disciplinary strength of the UiB and other resources available to us to strengthen research collaboration across the academic environment, with actors in public organizations as well as industry partners, and with national and international, world-renowned research groups.

## SEFAS HAS ALREADY COLLABORATIONS WITH A RANGE OF PARTNERS:

**INTERNATIONALLY:** Harvard Medical School, McLean, Boston, USA; MIT - Massachusetts Institute of Technology, Boston, USA; Yale University, New Haven, USA; Tohoku University, Sendai, Japan; Leiden University, LUMC; The Netherlands; almost all European Countries by the COST Action NET4Ageing. Representatives are directly connected to all of our projects, e.g., 5-D, CC.AGE, DARK.DEM, and are in charge of ethics committees og steering boards. They will also participate in this BetterAge SFI-application

**NATIONALLY:** Husebø is head of the Norwegian branch of the COST-Action and thus collaborating with Universities in Tromsø, Oslo, NTNU, SESAM in Stavanger, and University College in Førde. Moreover, we are collaborating with The Norwegian National Centre for Ageing and Health. And, not least, SEFAS has its basic funding from the Norwegian Ministry of Health and Care Services

**IN BERGEN:** Alrek Helseklynge, Medical Incubator; Haukeland University Hospital, Haralds plass Deacon Hospital, Bergen Municipality; Western Norway University of Applied Sciences; NORCE, Media City Bergen

**PRIVATE ACTORS:** We are seeking the collaboration and inclusion of industry partners who are doing their business in living environments, including lighting or hygiene equipment, digital solutions, social, mental, and physical activities, person-centered medication, communication, and more. Several businesses are already onboarded.



## 5 | BENEFITS IN AN SFI COLLABORATION

### HIGH VISIBILITY

SFI is a national flagship program. Your company as partner will be highlighted by us, leading to more media attention.

### NEW MARKET

An opportunity to expand your product pipeline into a new market, and a head-start in regard to market access.

### NEW COLLABORATIONS

Opportunities for company-to-company collaborations and international collaboration.

### OTHER GRANT SCHEMES

Partnership opportunities for other grant schemes that require formalized collaborations, e.g. through Innovation Norway; RCN; EU H2020...

### PHD GRANTS

A research collaboration with UiB can include business-PhD grants as part of the strategy.

### PERSONNEL AND KNOWLEDGE

Access to qualified personnel and knowledge upgrading. This might lead to improved and new products and services, new licenses and IP rights, as well as being part of scientific publications.

## SUPPORT FROM OUR RESEARCHERS

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### What support can partners expect from our researchers?

- Identification of gaps in elderly care
- Identification of citizens with high risk factors for complex conditions and neurological diseases
- Valid qualitative exploration of users` values and wishes: "What matters to you?"
- Validation of telecare/telehealth products by method development
- Implementation and dissemination of new products
- Supervision of common PhD candidates and master-students
- Support in commercialisation
- Development in employee skills

# PARTNERSHIPS

Three possibilities

## 6 | ONE BIG POTLUCK PARTY

A Centre for Research-driven Innovation is like a big potluck party where all contribute with what they do best. Budget wise, the total budget of around 280 mill NOK is split between the Research Council of Norway, industry partners, and the University of Bergen. We are including partners from three categories:

### **STRATEGIC PARTNERS**

Advanced research and development partners who want to collaborate with a comprehensive research community on their strategic challenges. They will employ their own data (and employees) in the quest for new insight and use the research to scale-up their innovation efforts.

Co-creation of new knowledge development and dissemination with research communities is well-known for them.

### **ASSOCIATED PARTNERS**

Commercial industry partners with a HealthTech product relevant for BetterAge. Partners want to get their product scientific tested and promoted, nationally and internationally with high focus on Export.

Commercial partners are participating with fresh money support (and in-kind values).

### **IN-KIND PARTNERS**

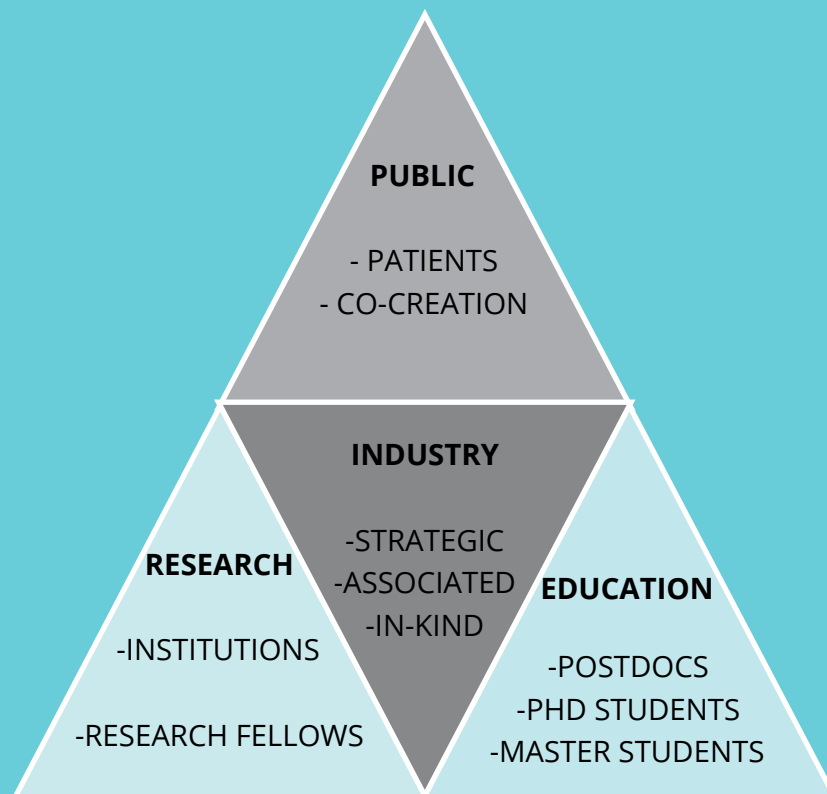
Actors who possess a unique competence of high value to the BetterAge research and have a keen interest in the topic. They are able to contribute with valuable data and in-kind resources.

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**BetterAge**  
**BUSINESS**  
**MODEL**

Industry partners and companies will collaborate through the UiB research community, with PhD candidates, postdocs, and Master students integrated into the partner companies. Together, we will develop individual strategies to utilize these resources to identify the companies` goals and challenges. Meeting arenas between research and industry will be created, and regularly summits and gatherings will be organized to discuss milestones, protocols and documentation.

The Centre for Research-driven Innovation will have a national Management Group, and international Scientific Advisory and Innovation Advisory Boards. It will be conducted by about 10 Work Packages led by Principal Investigators (PI), usually a researcher with professorial competence, industry partner or a representative for a user organisation (e.g. municipality). A centre director, centre coordinator and communicator will work closely with researchers and partners and are responsible for the dissemination of the results.





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# ARE YOU A PERFECT FIT IN OUR PROJECT?

## GET IN TOUCH

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Please contact  
Professor Bettina S. Husebø

☎ 0047 48094660

@ [bettina.husebo@uib.no](mailto:bettina.husebo@uib.no)

In collaboration with national and international research environments, the UiB is convinced that a BetterAge Centre for Research-driven Innovation is an outstanding initiative and has the potential to make a real change in elderly care with sustainable global perspectives. We look forward to develop solutions in a triple helix configuration, together with industry partners and the public.

Art direction: Inhouse UiB by Eli V.

Photos: colourbox.com unless otherwise informed

# SUPPORT

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