

# SKARABORGS HÄLSOTEKNIKCENTRUM, SHC HÖGSKOLAN SKÖVDE

COLLABORATION ARENA,  
KNOWLEDGECENTER, TESTBED

HÖGSKOLAN I SKÖVDE – WWW.HIS.SE

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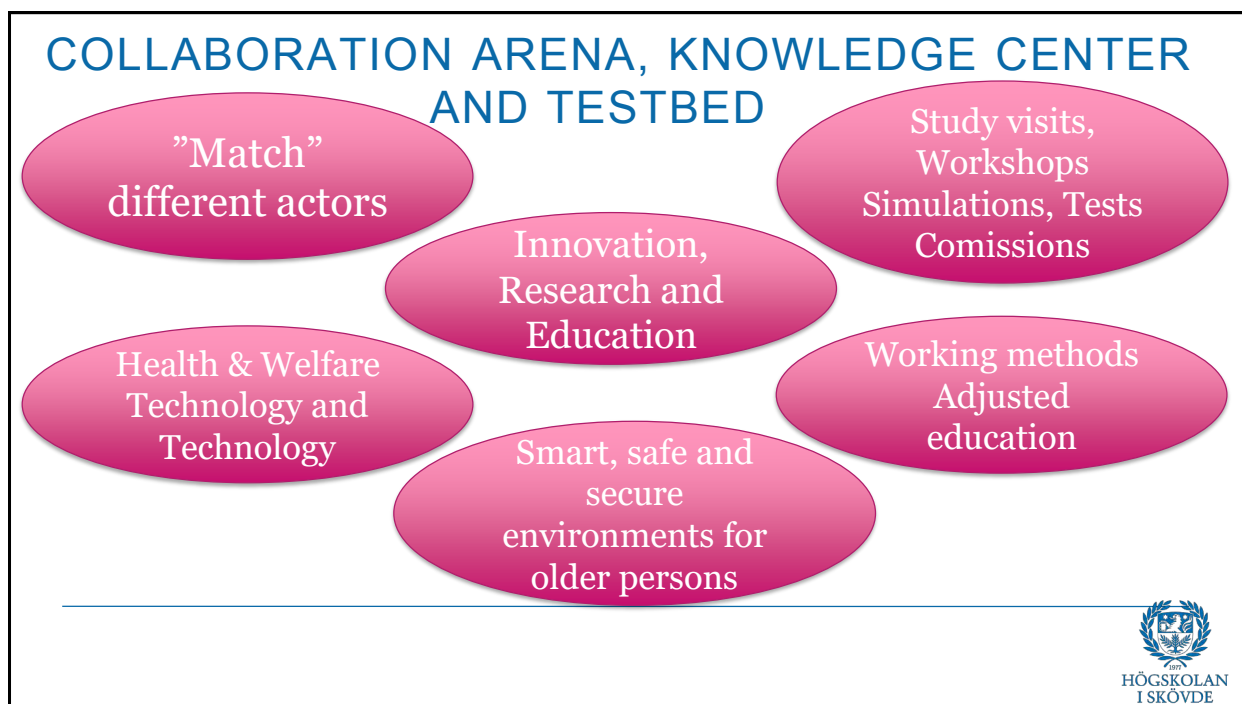
## SKARABORGS HÄLSOTEKNIKCENTRUM, HÖGSKOLAN SKÖVDE

EU-project: SIM2020 and Baltse@nioR2.0 2016-2021  
Skövde municipality: 2022-2023

Web film: Skaraborg Health Technology Center - University of  
Skövde (his.se)



**BaltSe@nioR 2.0**



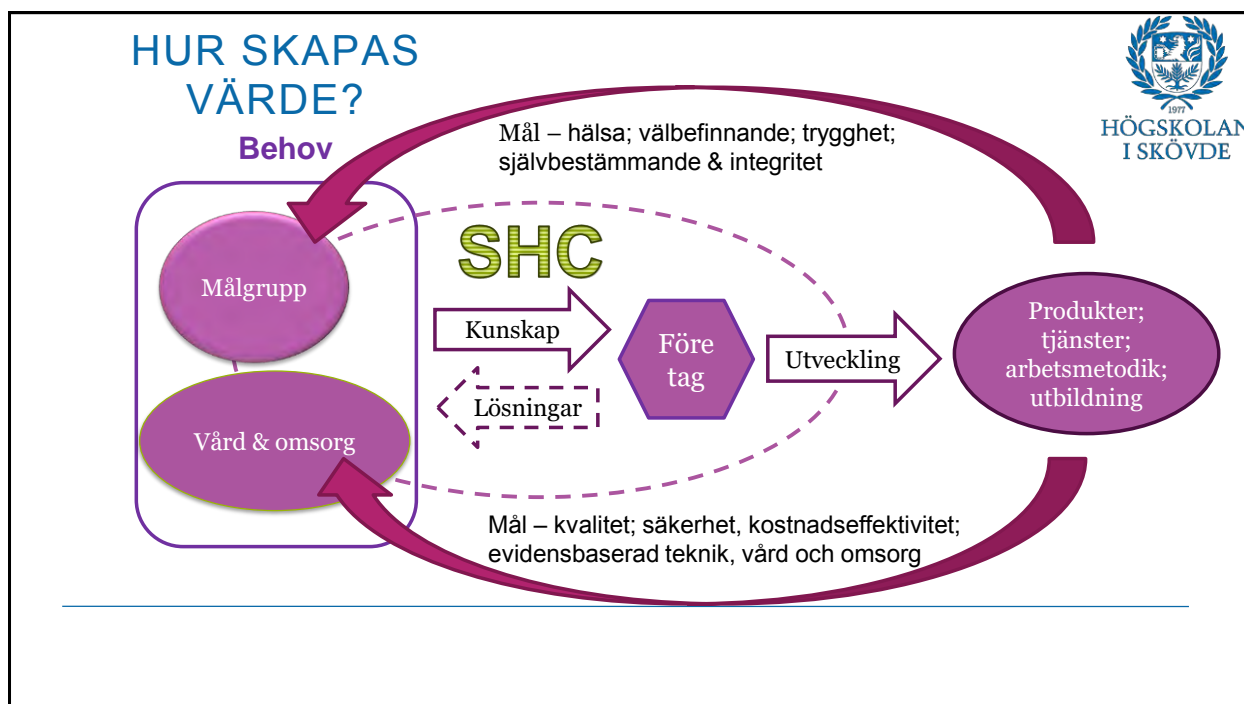
## SKARABORGS HÄLSOTEKNIKCENTRUM

### THE DIGITALISATION INITIATIVE OF THE YEAR -AWARD FROM VG REGION



Motivation: A small organisation testing various adaptations of health and welfare technology prior to introduction. A collaboration benefiting municipalities in Skaraborgs in order to minimize their own separate testing procedures. The close collaboration with the University of Skovde is a success factor and results in a positive encounter between research and practice.

<https://www.vgregion.se/regional-utveckling/verksamhetsomraden/digitalisering/digital-agenda/aktuellt/vinnare-digi-initiativ-2019>



## SIMULATION IN AGE SUIT GERT

- Reflect normal ageing and age related age problems
- Increase understanding of ageing and older persons, counteract ageims
- Experience based learning - internalised physically
- Demo of the SHC – innovation arena, accessibility adjusted test appartment with digital technology
- Assigned different "persona" and performs scenarios including various everyday tasks in the test apartment
- Observation of others acting the various "persona"
- Succeeded by group reflection
- Survey: Perspectives on Caring for Older Patients (PCOP) scale, Short-Form (SF) (Burbank et al., 2018) with an open question added
- 3,5 million SEK awarded by Familjestiftelsen Kamprad

## AGE SUIT, WHAT IS THAT

Vision and hearing impairment

Difficulties with balance

Pain in knee and spine

Tremor in hands

Tinnitus

Heavy body (loss of muscles)

Restrictions moving joints



## AGE SUIT - GERT



## RESULTS

**New insights** - *“It´s important to respect and understand their suffering and to give them the best possible care, they deserve that”*

**Gain insight in everyday challenges** - *“To experience how it is to have Parkinson disease and to handle everyday chores was very interesting. One was even afraid to fall with the poor eyesight and a challenge to write and read”*

**Carrier choice for the future** - *“I´m not interested in working with older persons, but I´m happy that some persons have the interest and want to do it”*

**Reflections regarding aging** - *”To grow old is difficult since one loose abilities that one had before”*

### **Reflektioner över miljön**

*”This environment is adjusted, how difficult should it not be in an usual environment”*

*”The technique is not only good, it is difficult to manage when you have bad vision and hearing”*

**Summary:** Gained insight and understanding and it is addressed a need of changed attitudes and acting towards older adults in general and more specific in the provision of care

## FUTURE HEALTH AND SOCIAL CARE – WHAT DOES IT LOOK LIKE?

- Decreased workforce but increased number of persons in need of health and social care
- Transfer of care to close/local care, often with support of digital technology
- Limited evidensbased technique
- Implementation process – participation, ”have everyone on board”, education, be userfriendly, super-user, time
- Personcentrerad care – tailored toward individual needs
- Digital technology- facilitator for proactive health promotion – identify ”the normal” and detect anomalies – adjusted and early interventions

## OLDER PERSONS PERSPECTIVE, USE AND NEED OF DIGITAL TECHNOLOGY

### **Vinnova project: Regional IoT Platform, County of Jönköping, Jönköping Municipality, Jönköping University**

Interviews with 15 Older persons 65 +  
Questionnaires (179) och Workshops (17)

### **Collaboration company Salusmea**

Interviews (8)



## CONT.

**Used digital technology:** Smartphone, tablet, computer, test mobile safety alarm

### **Differences in interest and willingness to use digital technology**

- Interest and curiosity
    - Willingness to learn new things
    - uphold social relationships, keep updated about what's happening in the society and world
    - read newspapers, social media, e-mail, pictures, look up information, bank-ID, contact and use of services at government, health care, bank and other authorities
-

## CONT.

- Unwillingness and hesitance grounded in fear and uncertainty
  - fear of new things, be deceived and lose money or sensitive information
  - loose control, not be in charge of one's own situation
  - deprived integrity, independence, safety and security
  - inadequate information and education

*“I can ´t control it....I don ´t like things that monitor me as long as I can manage on my own”*

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## CONT.

- Gives new possibilities but do not replace human contact
    - possibility to remain at home and send an alarm when help is needed
    - supports memory and reminder to conduct activities
    - one's own choice – prefer sensors instead of cameras to preserve integrity and autonomy
    - undisturbed sleep is appreciated
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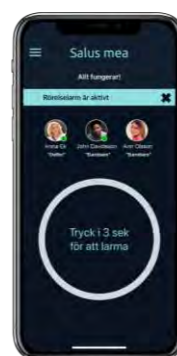
## CONT.

### Expressed needs now and in the future

- Reliable and sustainable function – be able to feel safe and secure
- Education and support based on individual needs - feel comfortable to use digital technique
- Difficult to catch up – support since the development of technique is rapid
- Request of mobile safety alarms that work outside
- Need of digital “fixare” handyman – good experience for those who have had the service
- Technique - compatible with each other and possible to integrate
- Use of technique to proactively support activities and continues use of technique – needed due to the rapid development

## MOBILE SAFETY ALARM - SALUSMEA

- Contact through Innovation platform VGR
- Involved members from SPF 2020
- Repetead workshops and test
- New testgroup June 2022 and fall 2023
- Focus – the concept Salusmea, test och evaluation and further development of function, design, service, education
- Focus on accessibility and being userfriendly





## EXPERIENCES & THOUGHTS



- Prevent uncertainty - Secure to move outside the home
  - Less fear of falling, illness and other risks
  - Safety, "someone sees me"
  - Private use before use in care
  - Proactive, health promotion?
  - Who should pay? Private? Municipality?
  - Prevent need of health and social care
  - Education material, web
- 

## ROLLOGUARD - BRILLIANZE

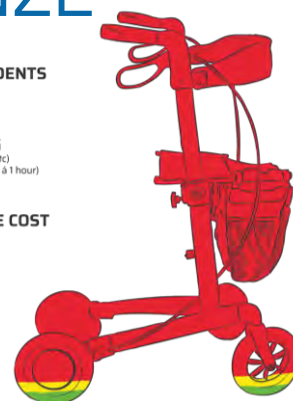
- Contacted by Innovation Platform Western Region
- Innovative fall prevention - brakes at acceleration - speed control
- Test running since May 2021 in Grästorp
- Continuous meetings for reconciliation and tuning
- Test also as gadget



**FALL ACCIDENTS**  
SEK 63 275  
(SEK 12 655/year)

**HANDLING**  
(Service, support etc.)  
SEK 1600 (4 users à 1 hour)

**PURCHASE COST**  
SEK 1200



RolloGuard  
© 2021 RolloGuard

# BEDSENSORS-SAFEBASE

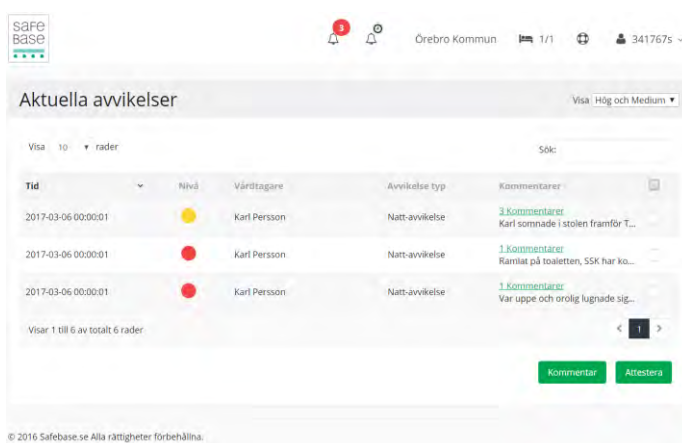
- Sensors bed and chair
- App and web interface
- Test in assisted living facilities in two municipalities since June 2020.
- Meetings for reconciliation and tuning the test
- Fixed sensors and wheels
- Data stored on server in Sweden



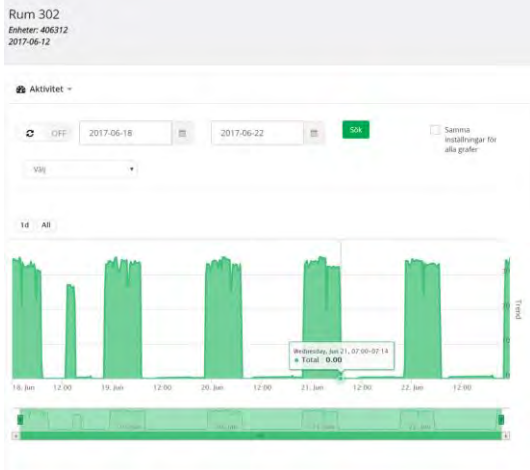
Mobile app - available  
in Swedish and English



Alarm events  
(in browser)



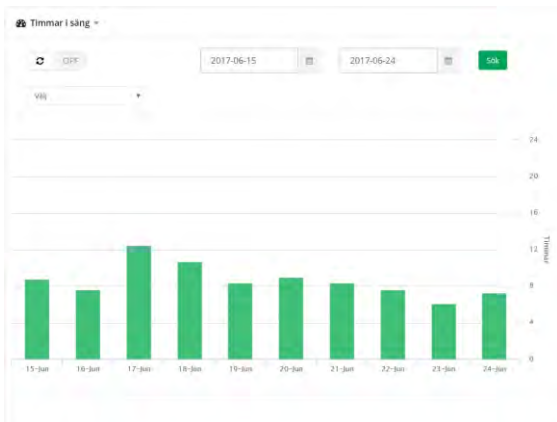
## Daily activity pattern over time and weight



## Activity during sleep



## Hours in bed per day



## Number of exits per day



# SAFEBASE - RESULTS

- Don't need to disturb "gives the older persons increased integrity and autonomy". The person can "sleep without being disturbed"
  - Safebase is a complement, "does not replace human contact"
  - Appreciate the information provided by the sensors as sleeping pattern
  - Use of information in planning and provision of care
  - Preserves integrity compared to cameras
  - "like it's made for those that wake up when the door opens at night"
  - Suggestions for improvement of app e. g. sound and sensors e.g. weight at fifth wheel
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5/10/2023



BaltSe@nioR 2.0

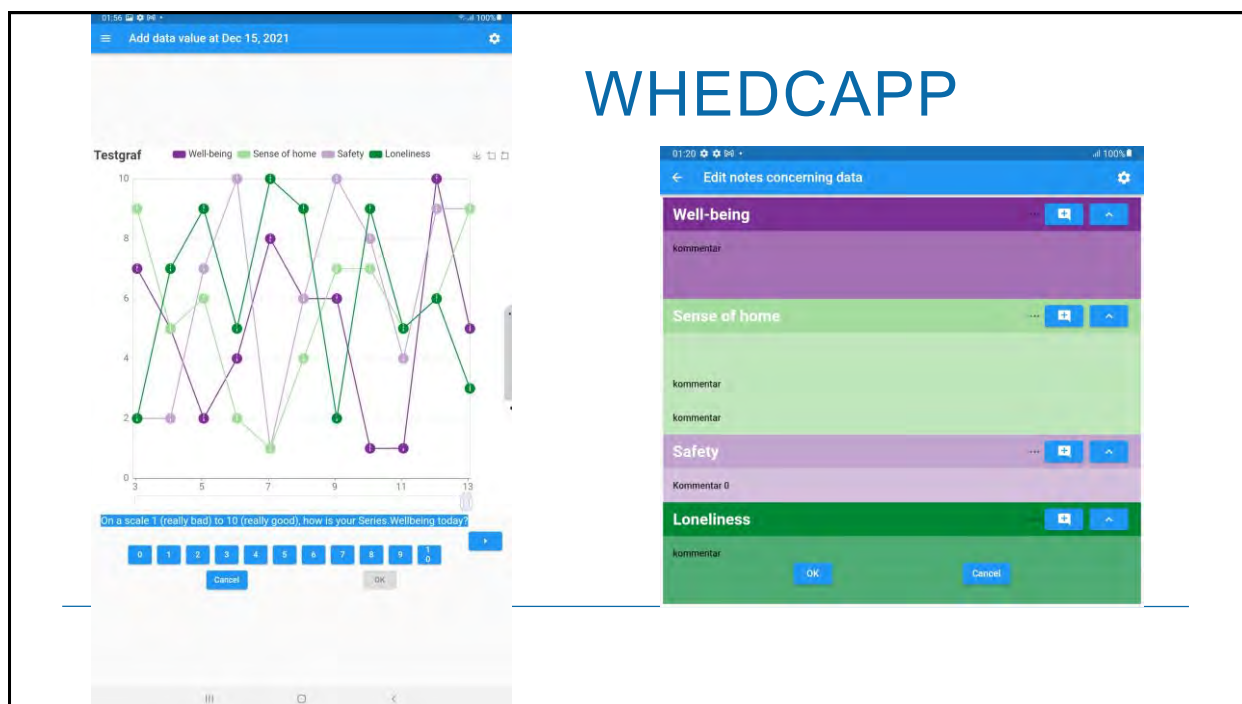


# WHEDCAPP

Well-being *Health Environment Data Collection App*

*Jonas Mellin & Catharina Gillsjö*

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## COMISSIONS: EDUCATION AND RESEARCH

- Comissions based on stakeholders' needs as presentations, simulation age suit, evaluations, interventions, follow-up research

### Current

#### Education:

- Presentations
- Simulation in age suit, Instructor simulation in age suit

#### Research:

- Evaluation of implemented larmsystem and safety sensor in assisted living facilities in HÄrryda Municipality

## POTENTIAL COLLABORATION?

- Innovation, research and education in collaboration in SHC?
- Using bed sensors, map out and predict health and activities?
- PULSE IoT- ongoing work in application
- In relation to simulation age suit? Cognition? Sensors?
- PhD project starting this fall “Monitoring heart failure patients with digital bedside sensors in municipal home health care with a mobile primary care physician. An intervention study.  
*Additions to this project?*
- More ideas? Schedule a visit at SHC? Please contact me!

## MOBIL FYSISK MILJÖ

- <https://www.youtube.com/watch?v=n9NnwVOvMUA>



# THANKS!

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