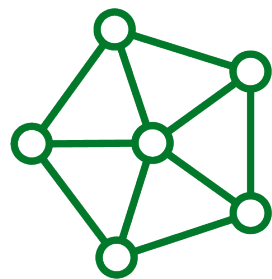




European Innovation
Partnership on Active
and Healthy Ageing

REFERENCE SITE



**REGIONAL
COORDINATION GROUP**
E-HEALTH AND WELFARE TECHNOLOGY
AGDER

 **UiA Centre for e-health**

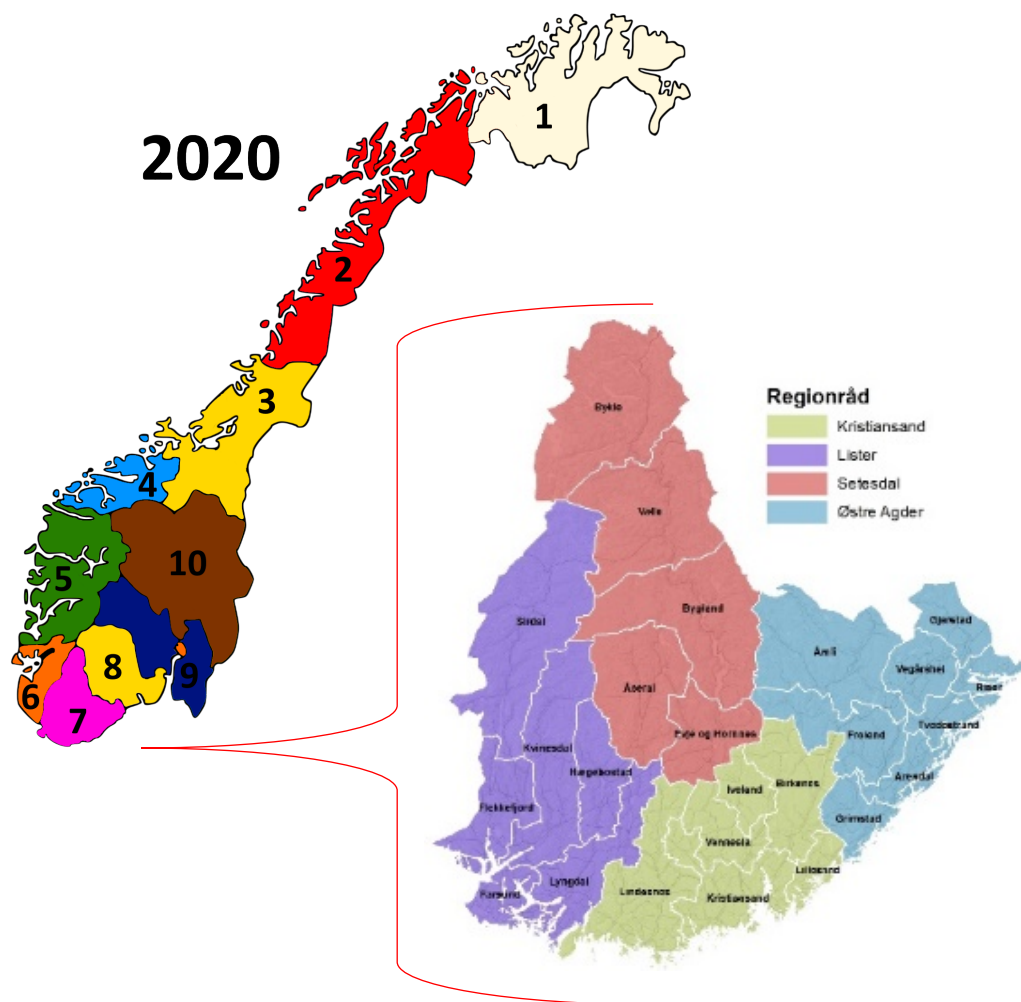
Agder - Norway

University of Agder	Ragni MacQueen Leifson	Project Manager Center for e-health
Agder Region	Kjetil Løyning	Program-manager eHealth Agder 2030
Agder Region	Silje Skeie Stray	Project manager, Digital telecare
Agder Region	Karoline Vassbø Nyhus	Project manager, Digital Telehealth
Agder Region	Renate Neteland Olstad	Manager, Call-center Telecare
Agder Region	Kathrine Melby Holmerud	Project Manager, Agder Living Lab USHT Agder East
Agder Region	Marit Svindland	Project manager, Innovation partnership Welfare Technology Agder

Agenda:

1. Agder
2. UiA: Center for ehealth (Quadruple helix)
3. Agder Living Lab
4. Welfare technology ambassadors and Demo apartments / viewing arenas
5. Implementing digital telecare and involvement of end users

Agder

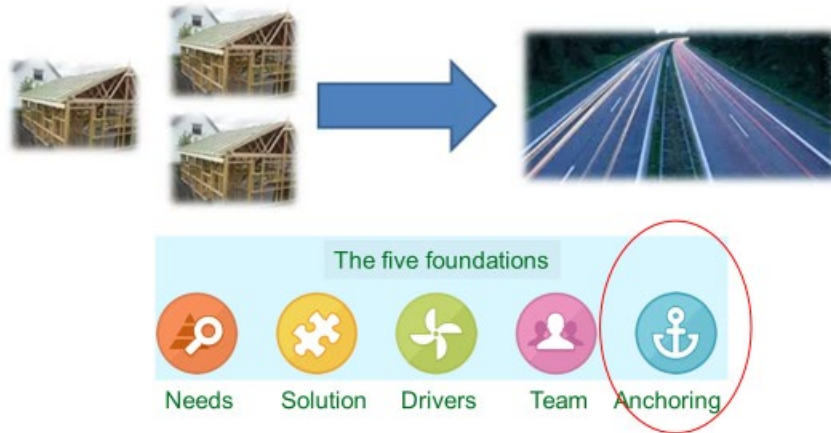


- 25 municipalities (300 000 citizens)
- The regional coordination group for E-Health and Welfare technology involves administrative as well as political decisionmakers.



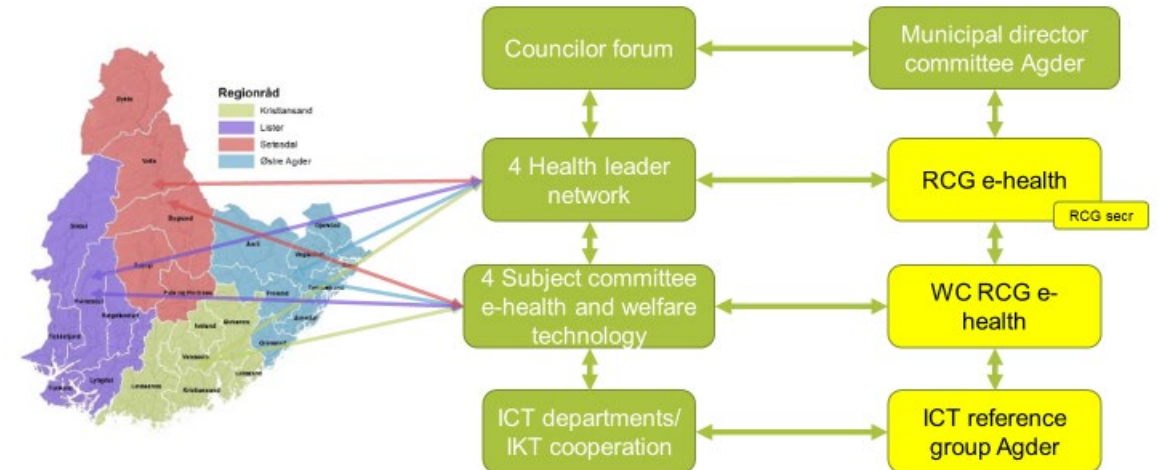
- South Norway European office
- European Innovation partnership - Active and Healthy Ageing
- Reference Site (2016 & 2019)

Agder strategy: From testing to large-scale operation



7

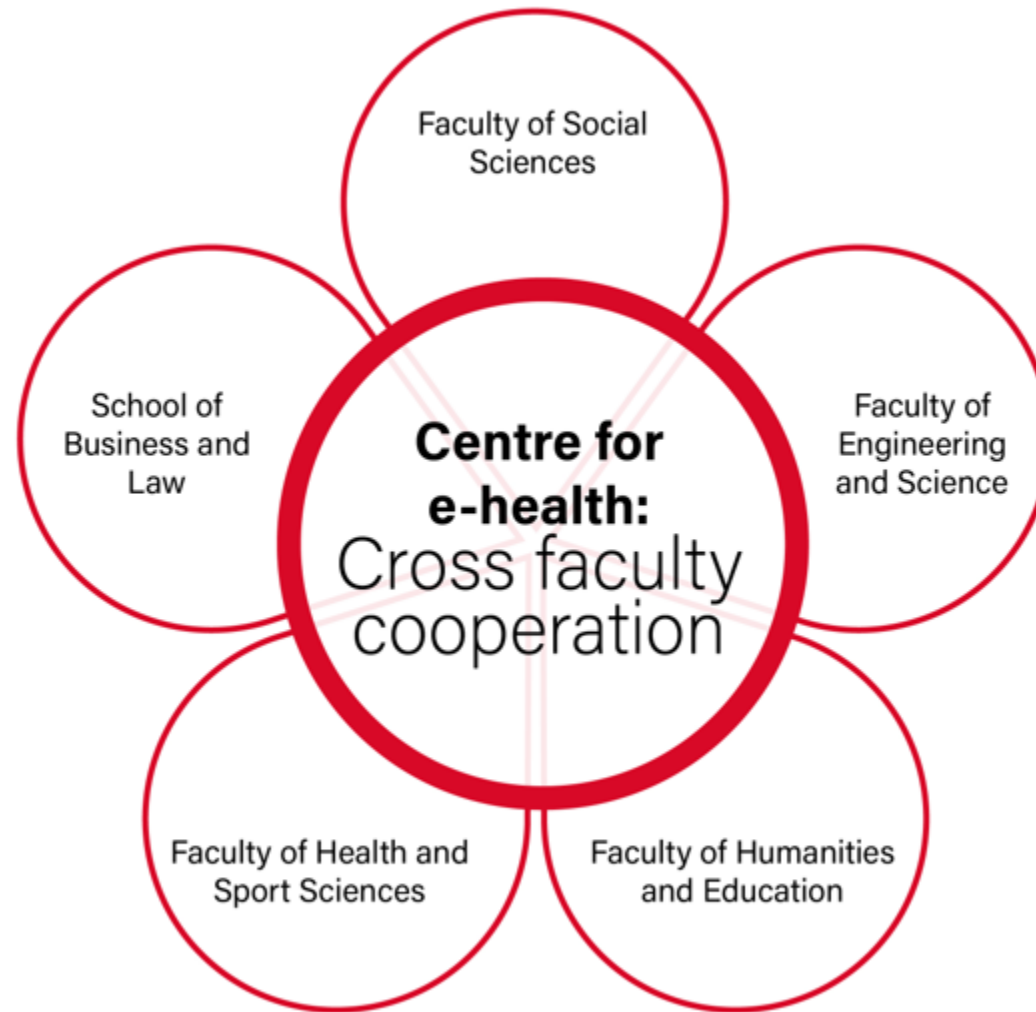
Regional coordination group e-health and welfare technology Agder - RKG e-health



8

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Quadruple Helix model



i4Helse

Agenda:

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3. Agder Living Lab (ALL)

AGDER LIVING LAB inviterer brukere, pårørende, helsepersonell og leverandører som deltakere i vårt levende testlaboratorium.

Bruker/pårørende:
Du får være med å utvikle og prøve ut nye løsninger.

Ansatt på sykehjem eller i hjemmetjenesten:
Du blir med på å forme den velferdsteknologiske utviklingen.

Produsent/leverandør:
Du får tilgang til testing av produktet i en reell driftssituasjon.

Agder Living Lab
utfører sine tester i fem trinn:

I drift i helse-
tjenesten

Brukertest
hjemme

Brukertest
- lab

Teknisk test

Definere behov



Systematic testing of
technology and
service design
together with users



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4. **Welfare technology ambassadors and Demo apartments / viewing arenas**
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5. **Implementing digital telecare and involvement of end users**

5. Implementing digital telecare and involvement of end users

- Order 1 process Agder
- Experiences from Agder

Order 1

The first municipality to adopt a new technology

- Delivery that is reused in other municipalities:
- Technical testing
- Service course
- Return on investment
- Information letter
- ROS analysis
- Information security



Completed processes per January 2021

Digital security alarm

Bed alarm

Smoke detector

Fall alarm

Door sensor

Camera surveillance

Medicine dispenser

GPS

Example from the project period

Overview of Digital Alarms - implementation, service innovation and competence development

No.	Municipality	Start-up meeting	Operation and type of response service (green indicates <i>in operation</i>)	Course of service	Return on investment	The ABC of WelfareTechnology	E-learning course
1	Kristiansand		Bemannet responscenter	Under arbeid	Under arbeid		I gang
2	Risør	23.11.2017	Bemannet responscenter	Under arbeid?	Under arbeid?	?	?
3	Gjerstad	08.12.2017	Bemannet responscenter	Nei	Nei	6	1: 20 stk
4	Tvedestrand	08.12.2017	Bemannet responscenter	Under arbeid	Forsinket	10	?
5	Froland	12.12.2017	Bemannet responscenter	Nei	Under arbeid	?	?
6	Birkenes	04.01.2018	Bemannet responscenter	Ok	ok	14 + 8 høsten 2018	Til høsten
7	Søgne	10.01.2018	Bemannet responscenter	Under arbeid ?	Under arbeid ?	Flere ?	?
8	Mandal	10.01.2018	Bemannet responscenter	ok	Under arbeid	24 + 17	ja
9	Marnardal	11.01.2018	Bemannet responscenter	Under arbeid	Under arbeid	-	Under arbeid
10	Grimstad	19.01.2018	Bemannet responscenter	Under arbeid	Under arbeid	-	-
11	Lindesnes	29.01.2018	Bemannet responscenter	Under arbeid	Under arbeid	6+0	ja
12	Lyngdal	09.02.2018	Teknisk ruting	Avventer prosjekt ?	Avventer prosjekt?	Flere	Har avtale
13	Audnedal	09.02.2018	Bemannet responscenter	Dagens ordning	Under arbeid	?	?

Order 1

Introduction of Welfare Technology Agder has assisted the implementation groups in the municipality:

- Start-up meetings before implementation → In total, more than 110 start-up meetings has been held
- Technical implementation
- Process guidance

Process for digital security alarms:

1. Order is delivered 2 days after contracting
2. Supplier ensure test procedures
3. Testing
4. Installation of digital alarms
5. Stable operation for 45 days
6. Approval of order 1
7. Payment of 100% of order 1

From analog to digital Security Alarm

Experiences from Agder

Relevant areas:

- Completion of replacement
- Actors involved
- Safe operation
- Technical alerts

Completion of replacement

- Installation of alarm at home receiving service recipient
 - Checklist for completion, home service performed assembly (replacement)



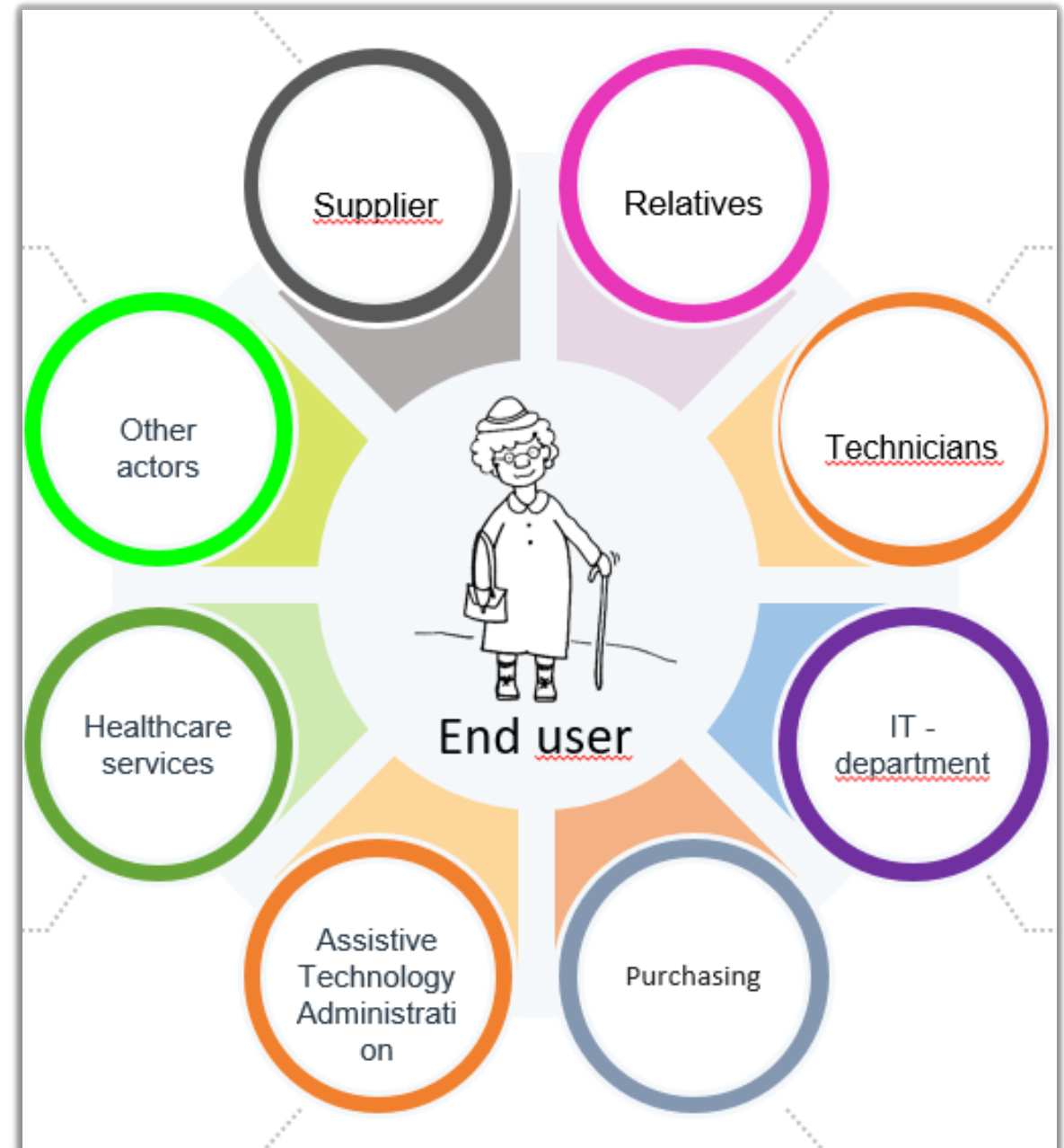
Connection of alarm	- only the red light in the center of the alarm shall be lit	<input type="checkbox"/>
Selection of attachment for alarm button	- Mount alarm formed like a jewellery on a string or on the bracelet - Put the string or bracelets that are not used back in the bag	<input type="checkbox"/> <input type="checkbox"/>
Alarm Test	- Test that the user is able to trigger the alarm, and that contact is made with the response center.	<input type="checkbox"/>
Test of Alarm reception	- According to the attached list.	<input type="checkbox"/>
Check key in key box	- Put a new label on the key and check that the key fits in the lock	<input type="checkbox"/>
Return of old alarm	- Check that the old alarm, accessories and user information are in the bag. Delivered to the office in charge	<input type="checkbox"/>

Involved actors

Who is responsible:

- The Response Centre
- The home municipality
- The nursing home
- IT department
- Supplier

Ensure that all actors involved receive the necessary information



A first step to more proactive telecare services

Outbound Calling Tests of Change

OUR WORKING DEFINITION

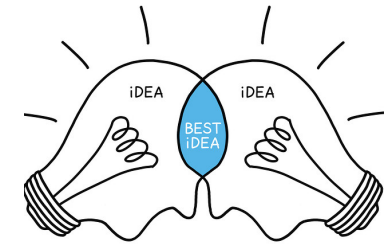
“Proactive Telecare has a **deeper relationship** with its service user, **gathering insights** into **patterns of behaviour** and **preferences over time**, which could provide a more **anticipatory** and **preventative** service, which is tailored to the individual.”

- ✓ Greater integration of telecare services with care, health, third sector & community services.
- ✓ Targeted and tailored outbound calls.
- ✓ Sign-posting for wellbeing.
- ✓ Escalation to statutory services when required.
- ✓ Outcomes focused with asset-based approach.



FUNDED TESTS OF CHANGE: FOUR TELECARE SERVICES

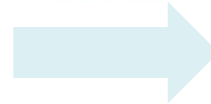
- Test models for delivering proactive outbound calling as an **enhancement** of an existing telecare service.
- Identify the **practicalities**, **challenges** and **enablers** for delivering the tested model.
- Identify all costs and benefits to establish **desirability**, **sustainability** and **scalability**.
- Use the findings to **further develop** proactive telecare service delivery models for Scotland.



PROACTIVE TELECARE LEARNING COLLABORATIVE (Dec '20 – June '21)

Aims to maximise learning across the tests of change by creating opportunities:

- for **knowledge exchange**;
- to **share** learning, experience, ideas, successes and things that don't go quite so well;
- to **problem solve**;
- to **co-design** aspects of their project; and
- provide **peer support**.



2018-2021

Home and Mobile Health Monitoring Programme

- focus on Blood Pressure Monitoring *at scale*
 - simple SMS service
 - <https://tec.scot/bp-scale-up/>
- **Expand & accelerate** the use and adoption of HMHM for BP across **Primary Care**
 - **Extend reach** to a further 20,000 citizens by 2021
 - **Increase uptake** to above 50% of Primary Care Practices across Scotland
 - Support Large Scale redesign of hypertension management – whole pathway focusing on supporting Diagnosis, medication management and long term monitoring

2021-

Remote Health Pathways Programme

- New solution procured – inhealthcare (single supplier with options for integrating with Digital Telecare)
- Expansion in primary and secondary care:
 - ✓ Covid-19 Clinical Assessment tool
 - ✓ Heart failure
 - ✓ COPD
 - ✓ Asthma
 - ✓ Peri-operative
 - ✓ BP in maternity
 - *Chronic pain management; cancer; MSK Triage; Pulmonary & Cardiac Rehabilitation; Covid-19 Rehabilitation*



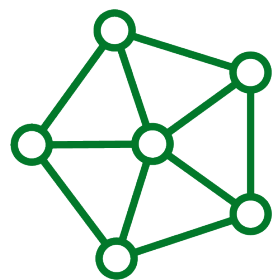
Meet ADAM (About Digital And Me)

Helping you find
technology products
matched to your needs.

Learn more www.meetadam.co.uk



- Launched September 2020
- Co-designed with people living with dementia and carers
- Helps find the technology (citizen technologies) people need at the right time, based on the things that are important to the person



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E-HEALTH AND WELFARE TECHNOLOGY
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 **UiA Centre for e-health**

Agenda:

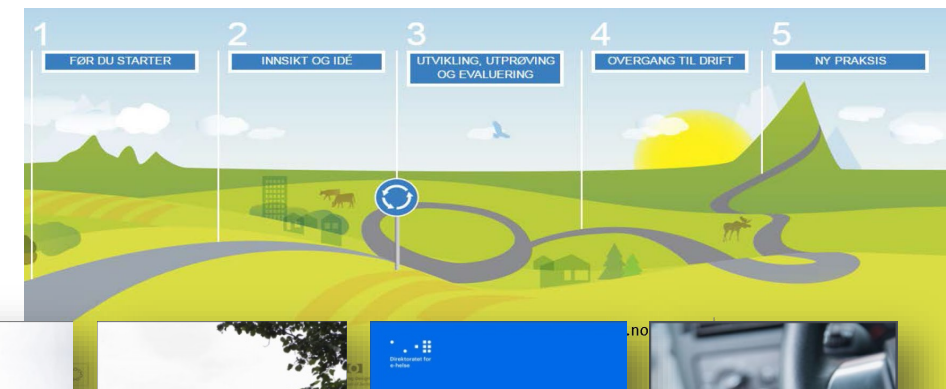
1. National Welfare Technology Programme
2. Program E-health Agder 2030
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4. Bring your own Device
5. Handling and routines - Technical alarms

National Welfare Technology Program

Think big – Start small – Scale fast

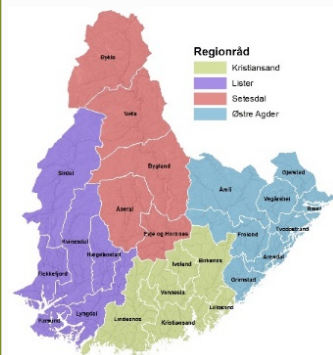


- Develop common practical tools and methods
- Financial support schemes
- National recommendations and demands.



RCG e-health

25
municipalities



Buy-in

RCG e-helse

RCG e-helse sekr

AU RCG
e-health

Project requests

Coordination

E-health Agder 2030

Joint regional steering
committee

Program management
E-health Agder 2030

Innovation
partnership
Agder

Telecare

Telehealth

National
e-health
solutions

Akson
Agder

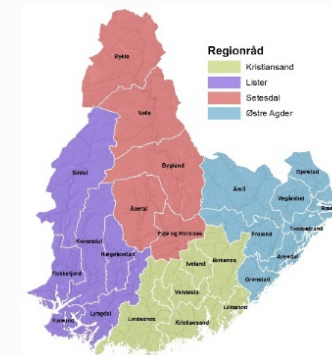
Project managers in all 25 municipalities,
with project groups

Project management

Steering

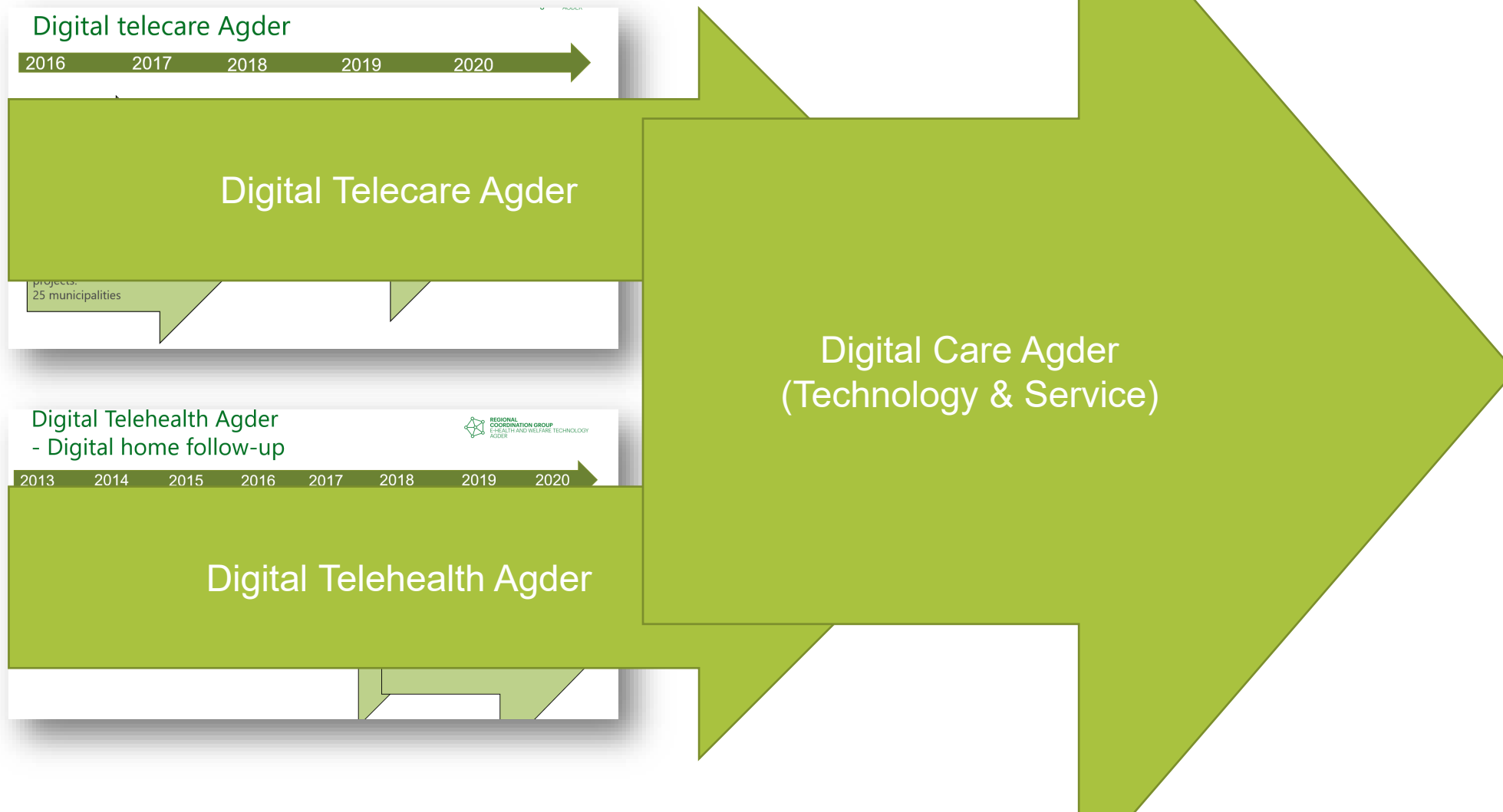
Public-public
cooperation Agder

Cooperation committee



**Operational
organization**

Comprehensive service model Agder



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Innovation partnership Welfare Technology Agder

Digital Telecare Workshop 4 - Citizen Focus / Digital Telecare & Telehealth
20.01.2021

Innovation partnership Welfare Technology Agder

The goal is to develop integrated solutions for both telecare and telehealth that

- takes care of the citizen's needs
- simplifies the working day for health professionals
- provides opportunities for joint management, operation and maintenance

Today`s status:

The municipalities in Agder:

- Have extensive experience with the use of both telecare and telehealth
- Have aimed to have telecare in use on a large scale since 2017
- The status today is that the municipalities in Agder have a lot of telecare, and some telehealth, in use, but we are not on a large scale

What prevents municipalities on a large scale use?

The challenge picture:

- Today's technologies and services are fragmented
 - If a patient needs e.g. medicine dispenser, GPS and security alarm, there are three different administration systems
 - Three different login methods
 - The response center receives alerts in three different systems
 - Etc.
- There is a lack of integration between telecare and telehealth solutions and medical record systems (EHR)
- This leads to significant additional work for health professionals, technicians and ICT

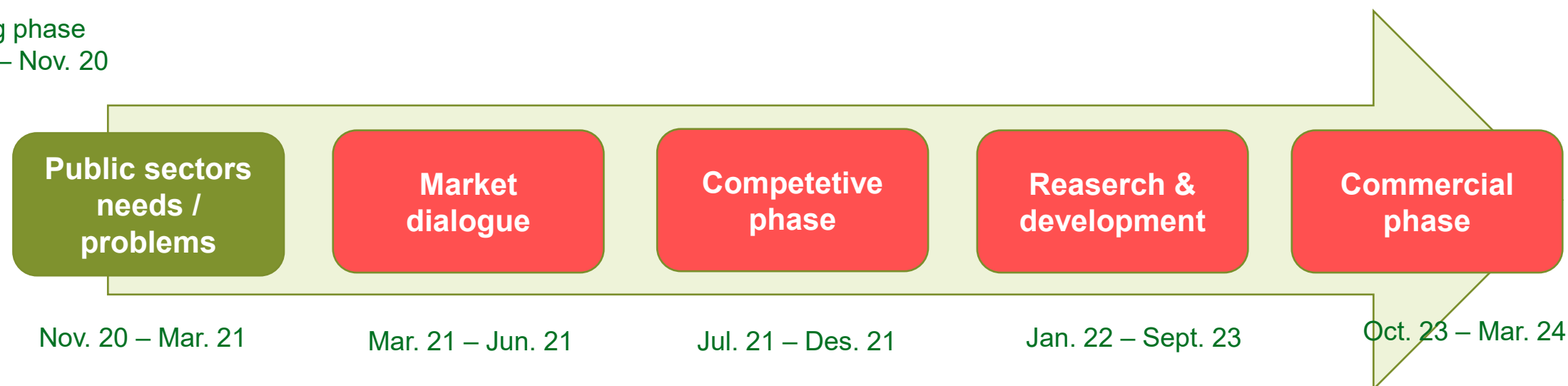
The big question



How can we, together with the supplier, develop a solution that solves these challenges?

Project period June 2020 – March 2024

Planning phase
Jun. 20 – Nov. 20



Agenda:

1. National Welfare Technology Programme
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5. Handling and routines - Technical alarms

Digital welfare technology program, Telemedicine in Agder

January 2021

Project group

Morten Lauknes- Kristiansand
Karoline Vassbø Nyhus Kristiansand
Trudi Lohne- SSHF
Carina Jensen SSHF
Camilla Gabrielsen- Farsund
Christine Widding Kristiansand
Torunn Helen Eidsaa- Psykisk helse



Suitcases with tablets

- Suitcases with tablets and medical devices
 - Logistics
 - Siemens Healthineers sending suitcases by post to the call sender



Bring your own device (BYOD)



Login- safety level 4

15:09

idporten-ver1.difi.no

SIEMENS HEALTHINEERS (STAGING KUNDE)

VELG ELEKTRONISK ID

MinID
Med kode fra SMS eller PIN-kodebrev

BANKID
Med koder fra banken din

BANKID PÅ MOBIL
Med sikker legitimasjon på mobil

BUYPASS ID I MOBIL
Med passord/SMS eller mobilapp

Commfides støttes foreløpig ikke på denne enheten.

[Slik skaffer du deg elektronisk ID](#)

Register personlige data

Fødselsnummer *
18079415142

Fornavn *
Test

Etternavn *
Testing

Adresse *
Gatenavn

Postnummer *
1487

Sted *
Hakadal

E-Post *
a@a.com

Mobil *
123456789

Fastlege
Dr. Dracula

Send inn

Velkommen som bruker

Du er nå registrert for oppfølging av dine symptomer. Nedenfor følger informasjon om hva du skal gjøre videre. Videre registrering vil foregå gjennom en egen nettside eller app. Tilgang til nettside og apper finner du nederst på denne siden.

Vi anbefaler at du lagrer denne siden i favoritter, slik at du enkelt kan lese dette igjen.

Innmelding av helsetilstand

Når du logger inn eller åpner appen vil du se et bilde som ser ut som på bildet. Trykk på bildet for å forstørre.

Meldinger

Her kan du kommunisere med helsepersonell

Kvitteringer

Her ser du innsendte skjemaer og om det er sett av helsepersonell

Informasjon og vedledning

Oppdatert informasjon og råd fra FHI, brukerveiledning og råd for sykdom i grønn, gul og rød sone



Logg ut

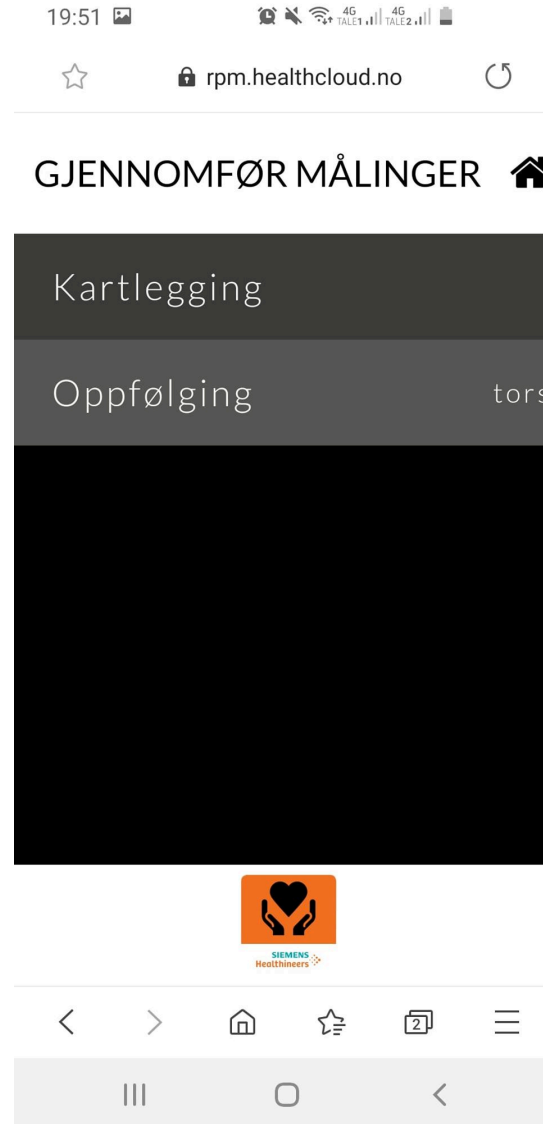
Gjennomfør målinger

Her kan du gå til kartleggings- og oppfølgingsskjema med daglige registreringer

Mine målinger

Her ser du dine registreringer feks. temperaturer

Digital Hands app



Benefits of using BYOD

- Potential for implementation of telemedicine on a larger scale
- Saves time on support and training- instructions on use of tablet
- Easier logistics
- The app can be distributed to several patients at a short period of time- by sending link
- Reduces costs of technical equipment
- Automaticly bluetooth connections for medical devices

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5. Handling and routines - Technical alarms

Safe operation

The municipalities check the Status Overview and Alarm Log in the administration tool daily

- Errors are initially reported to the Home Care Service.
- If the Home Care Service cannot solve the error, a technician is requested from the municipality
- **Contact status** shows whether there is contact between the security alarm and the portal, and when
 - Also referred to as *heartbeat*
- The municipality is prepared for action based on category of error and scope

Sikker drift av velferdsteknologisk utstyr:

- Sees i sammenheng med **KEIV** prosjektet
«Robusthet i **K**raft, **E**kom, **I**nformasjon og **V**elferdsteknologi»
- Ledet av Dag Auby Hagen – ass. Fylkesberedskapssjef i Agder



Technical alerts

- **Operating status:** type of error?
 - Appears in CMP (category: green, yellow and red)
- **Contact status** shows whether there is contact between the security alarm and the portal, and when this last happened. (Also referred to as heartbeat).
 - Fault on alarm transmitter and / or security alarm?
- **Check Power connection** and if this was yellow when the disconnection took place.
 - Due to a power failure or user error?
- **Missing (GSM) / 4G coverage**
 - Coverage is initially attempted by changing the location of the Security Alarm
 - If the problem cannot be solved locally, contact the supplier
- **Battery replacement**
 - Battery in transmitter and receiver normally has a lifespan of 5 years. When batteries start to run low, this is notified in the CMP log



Oversikt over trygghetsalarmen	
Merke	NEAT
Modell	NOVO
Alarmkode	47580011461834
Primærnett	
Sekundærnett	
Serienummer	10041729
Gruppe	Risør kommune
Installasjon	Installert

Driftsstatus	
Driftsstatus	Sender er utenfor område
Kontaktstatus mot portal	Ok
Status siste alarm	Ok
Strømtilkobling	Ok
Akkumulator	Ok
Radioforstyrrelser	Ingen informasjon
Batteri i tilbehør	Ok
Radiotest	Sender er utenfor område
Siste omstart	
Programming state	Ok

Programvarestatus	
Dataoppdatering	Synkronisert
Programvaretype	
Programvareversjon	

GSM status	
GSM-Operatør	24201
GSM Signaletstyrke	23 (-67 dbm)
GSM-Posisjon	58.717371,9.223754
ICCID	89470000170612018341

Digital Telecare Twinning Knowledge Exchange Webinar



Wednesday 20 January 2021
10:00 – 12:00 CET



**REGIONAL
COORDINATION GROUP**
E-HEALTH AND WELFARE TECHNOLOGY
AGDER



AGENCIA DE SERVICIOS SOCIALES
Y DEPENDENCIA DE ANDALUCÍA
Consejería de Igualdad,
Políticas Sociales y Conciliación

**DIGITAL
TELECARE**

Scottish Local Government



Digital Health
& Care Scotland

Digital Health Europe has received
funding from the European Union's
Horizon 2020 research and
innovation programme under grant
agreement No. 826353

CITIZEN FOCUS

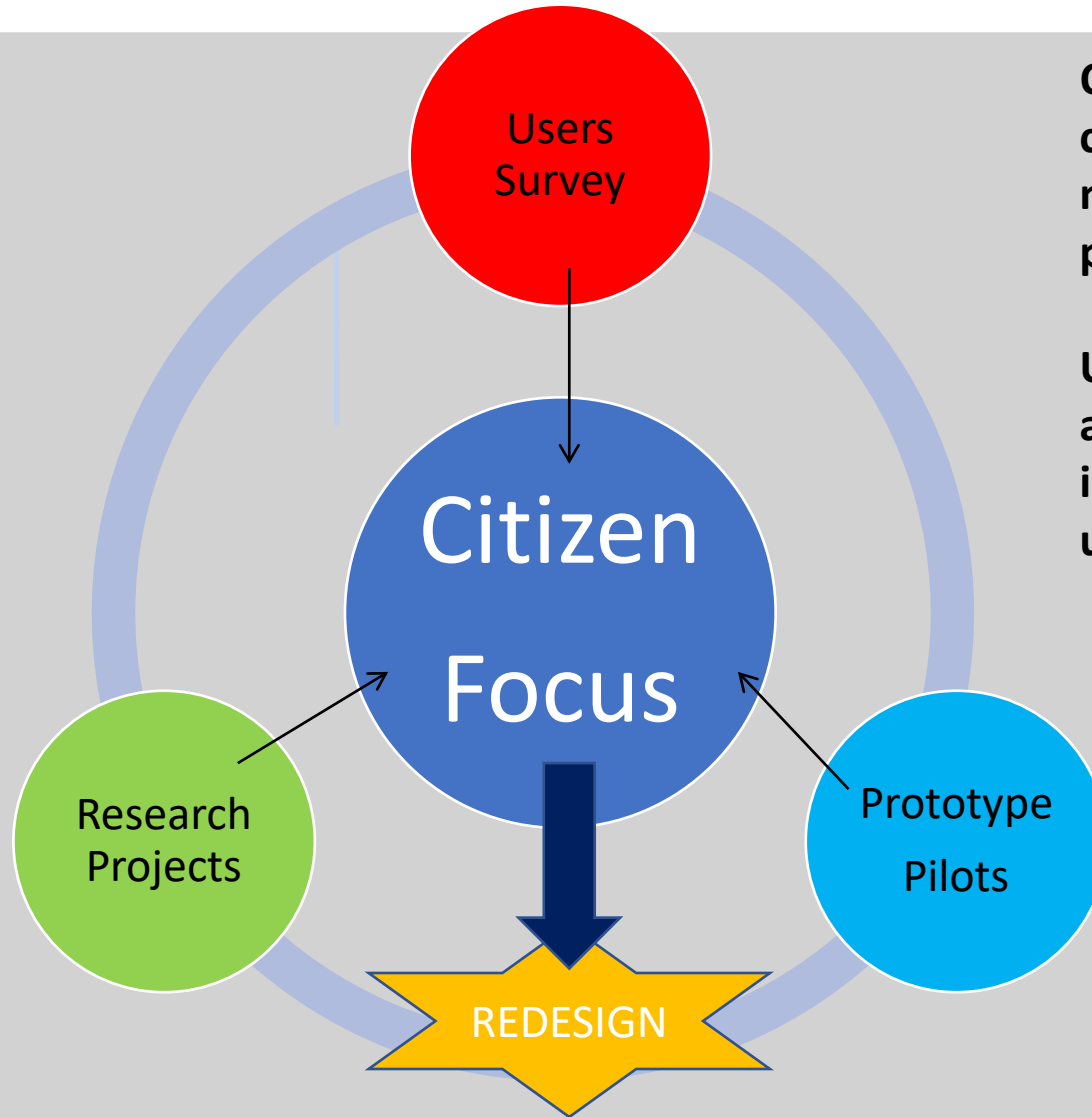
The Andalusian Telecare Service (SAT) was generated following a political commitment to assist the elderly population of Andalusia and it has been progressively implemented in different groups of population

- People over 65 years of age
- People with disabilities
- People with some degree of dependency

The original design and implementation of the service at large scale followed technical and political criteria to create an effective and efficient service.



CITIZEN FOCUS



Over the years, the service has been subject to significant changes at technical and administrative level in order to meet the growing demand of the service by the ageing population.

Users Feedback from internal and external projects aswell as from the annual survey contribute to gather information on needs and requirements which in turn are used to re-design the current service.

Users Satisfaction Survey

Additional features you would like the SAT to provide (open question)

- Follow Up calls 137/300 (**Proactive telecare**)
- Home assistance 116/300
- Telehealth 38/300
- Mobile telecare 27/300
- Support with administrative tasks 25/300
- Home visits 20/300
- Information on SAT resources 5/300
- Legal assessment 2/300

Telehealth connection



Coordination with Health Emergency Services

- Real time transfer of voice and data when receiving an emergency call at SAT
- Users information
- Triage
- Automatic status update
- Information to family members
- Follow up calls

Coordination with Medical Advice Services

- Real time transfer of voice and data when receiving an medical advise request call at SAT
- GP appointment managed by SAT own personnel through a dedicated health services web
- Appointment reminders
- Link to emergency services if neccesary
- Lowering medical services workload