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The “Living Lab” at Gundestrupgaard

Implementing welfare technology in the
Department of Health and Culture



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Who are we?

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Head of departement

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Consultant of welfare technology



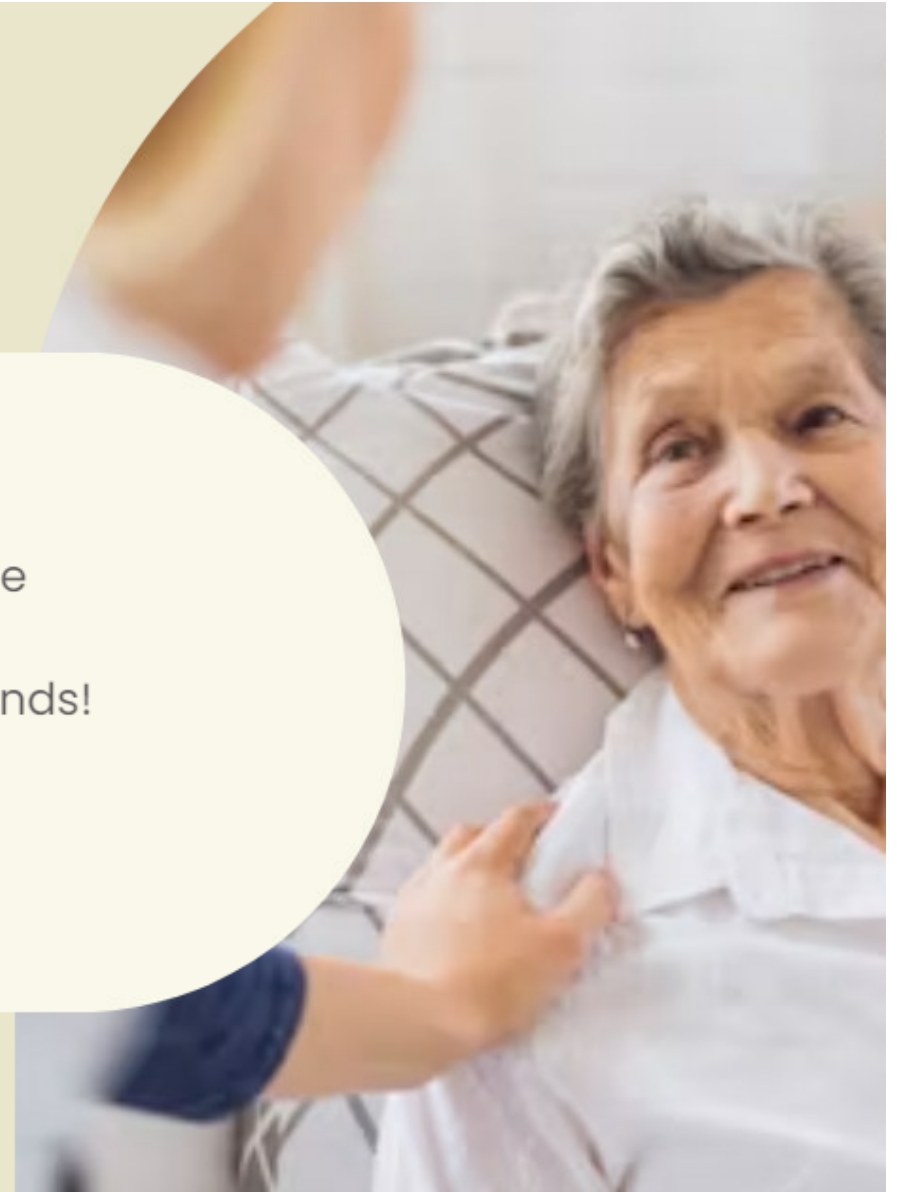


First things first...

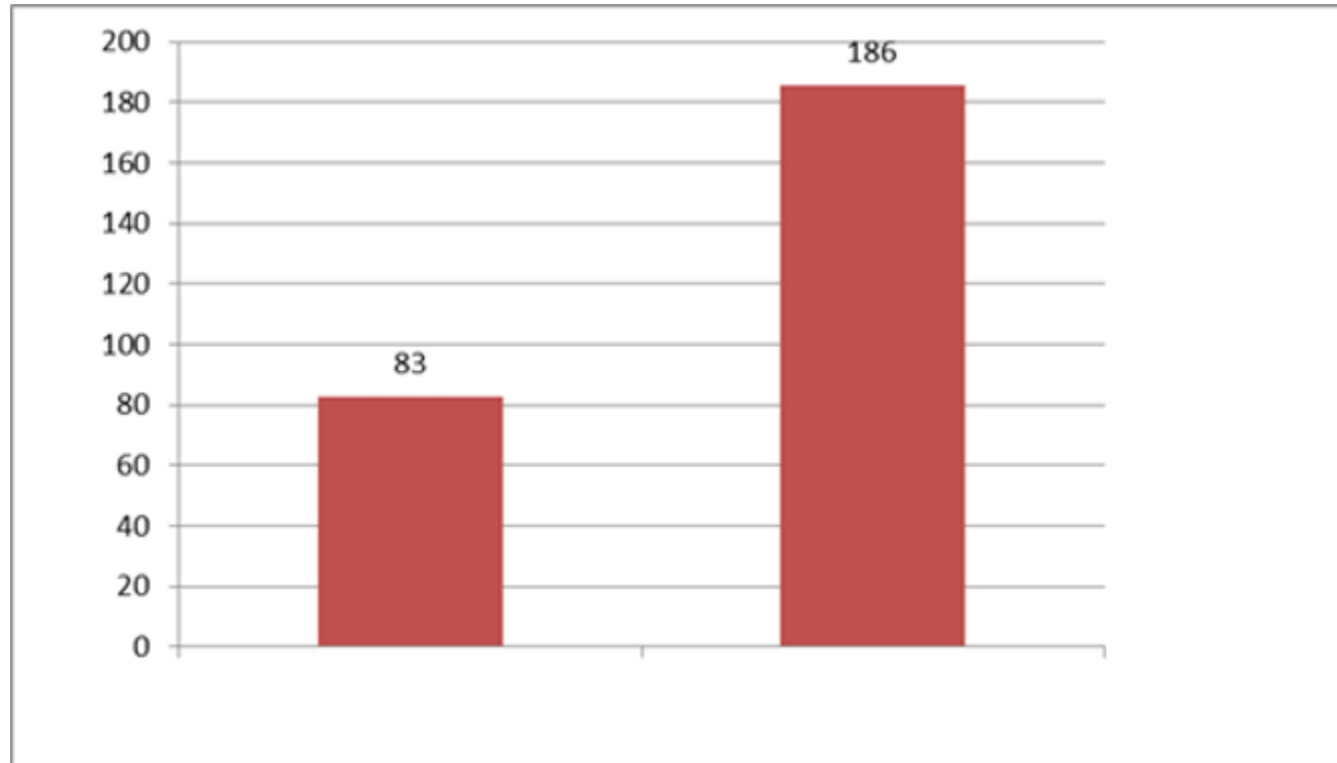
Why is welfare innovation in
welfare technology important?

The future challenges within the field of the
care for the elderly are considerable, and
recruitment alone will not meet the demands!

- More elderly people
- An ever changing healthcare system
- Recruitment challenges



The workforce situation in Vesthimmerland Municipality



The need for extra healthcare workers in 2030



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The Danish Resilience Commission:

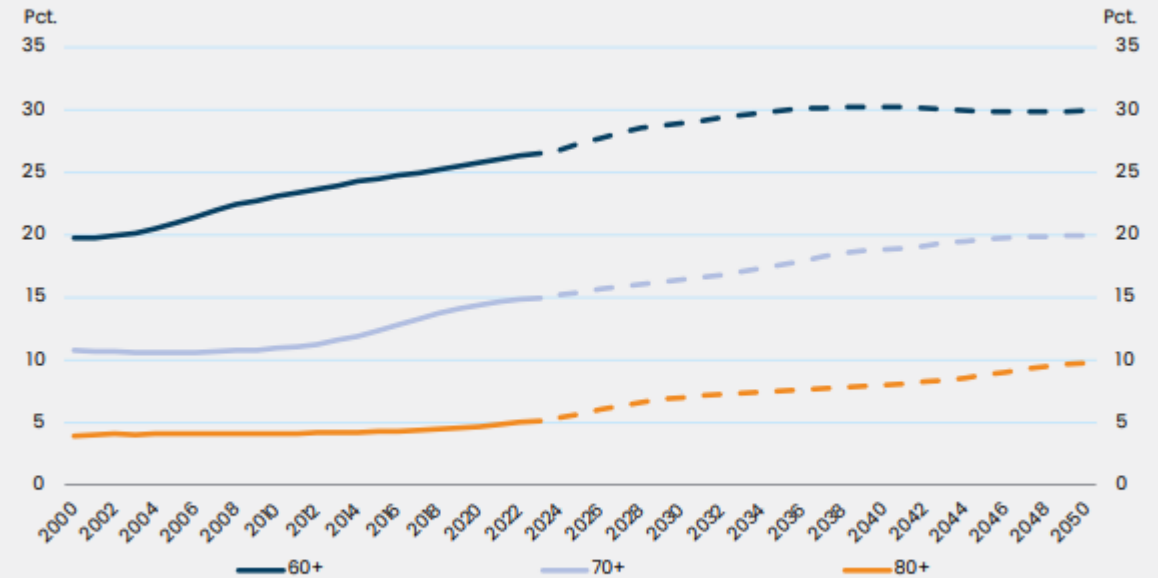
Kommission
for **robusthed i**
sundhedsvæsenet

Pixi

Robusthedskommissionens anbefalinger

September 2023

Projected development of the elderly age groups, 2000 through 2050



Source: Statistics Denmark

Recommendation no. 6: *Introduction of a common principle of "digitization and technology first"*



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Welfare technology as part of the solution to the challenges



- From a “challenge of recruitment” to “a challenge of capacity”
- Service and care delivered in “a new way”
- Not done in order to save money but to ensure the delivery of services in the future

Strategy for implementing welfare technology



- Focus on large scale projects which analyses indicate will make an impact
- Living Lab replaces former pilot schemes
- Widespread support within the municipal organisation
- Success is key – not necessarily the development of entirely new technology





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"Hal 3" Living Lab Vesthimmerland

Living Lab - Healthcare



Living Lab a place AND as a method

Living Lab

A method of operation

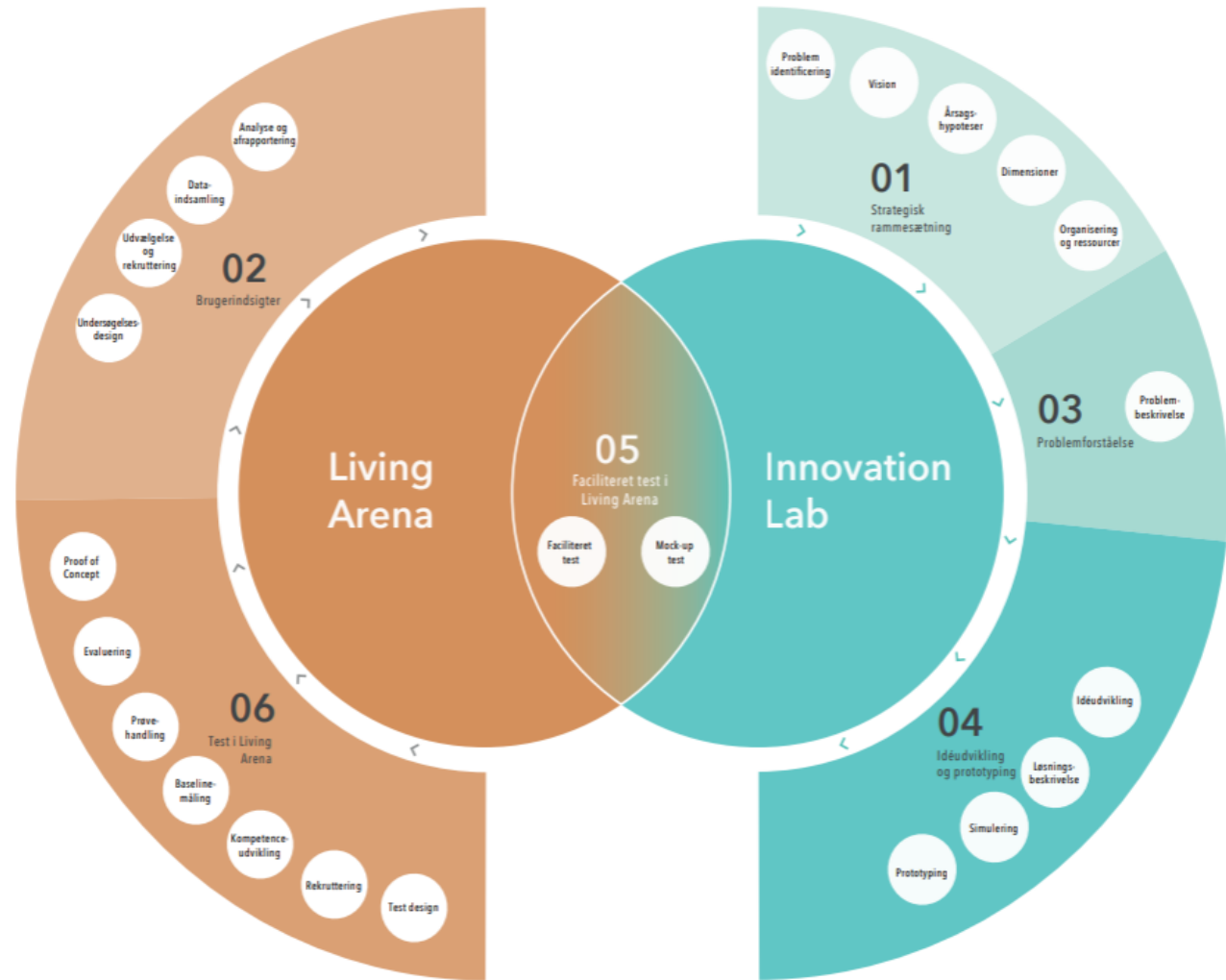
- A way to identify new ideas and needs

AND

A place for

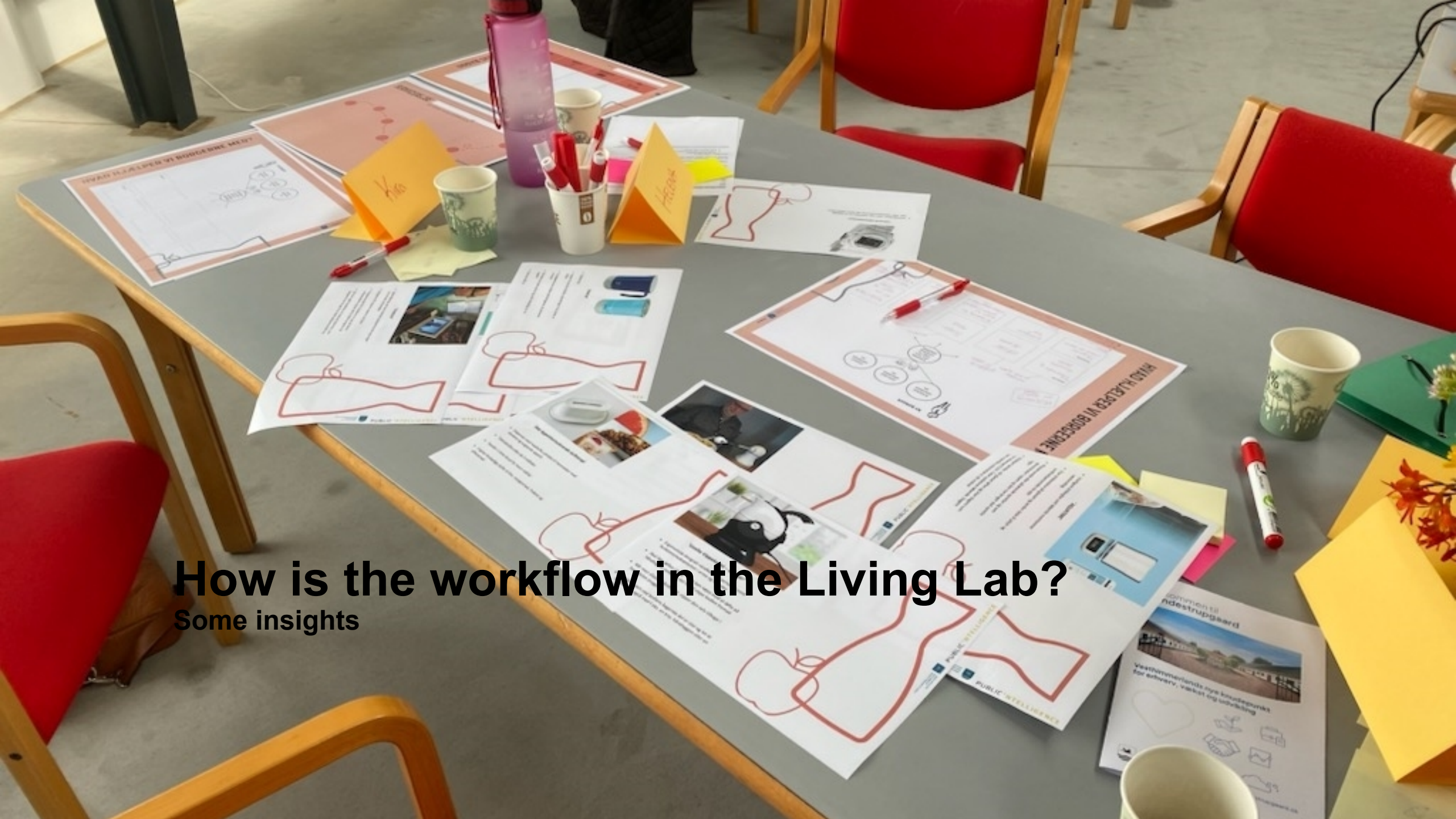
- Developing, testing and adjusting
 - New technology
 - Practical solutions
 - New workflows

In a municipal context



How is the workflow in the Living Lab?

Some insights



Fourth phase: Idea development and prototyping



Model: Public Intelligence



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Opening workshop

- **Medication**
 - Medication dispensing
 - Medication reminder
- **Fluid intake/record-keeping**
- **Food preparation**
- **Personal hygiene**



Opening workshop



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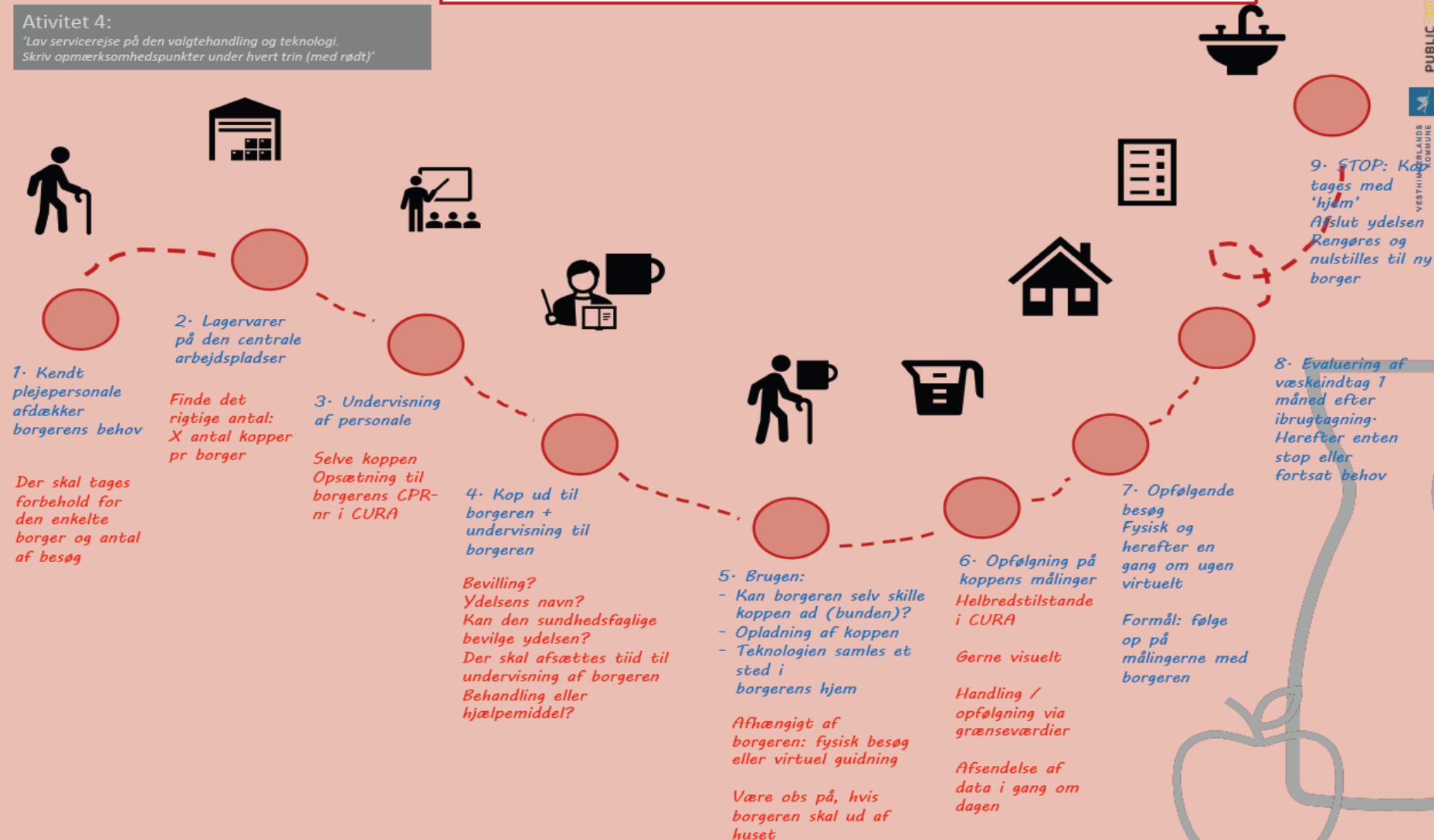
Example of workshop idea

SERVICEREJSE

Ativitet 4:

'Lav servicerejse på den valgtehandling og teknologi.
Skriv opmærksomhedspunkter under hvert trin (med rødt)'

Væskeskema / væskeindtag (1,5 liter /dag)- intelligent kop



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Fourth phase : Simulations – purpose and procedure

Why these simulations?

- To test the service
- To test the employee's perception of administering the service as well as the citizen's perception of receiving the service
- To test the different technologies from the organizational perception
 - How does it affect the workflow

PRØVEHANDLINGER

PLAN OG FORBEREDELSE

[Beskriv hvilken serviceejse prøvehandlingen relaterer sig til].
'Støtte til personlig pleje over skærm'



LIVING LAB

04 Ideudvikling & Prototyping

HVAD PRØVEHANDLES?	A. Personlig pleje v/ håndvask via skærm	HVAD PRØVEHANDLES?	B. Assistance til brusebad via skærm	HVAD PRØVEHANDLES?	C. Assistance til påklædning via skærm
Hvordan vil vi gøre det:	- SSH / SOSU guider borgeren igennem tandbørstning, redning, kropshygiejne som beskrevet i serviceejse - Undervejs skal borgeren på toilettet. Hvordan håndteres situationen?	Hvordan vil vi gøre det:	- SSH / SOSU guider borgeren igennem brusebad fra klargøring hen over afklædning og til afslutning af badet - Skærm placeres, så man kun kan se borgerens fødder - Under afklædning taber borgeren sin kam ind under vasken. Hvordan håndteres situationen?	Hvordan vil vi gøre det:	- SSH / SOSU guider borgeren igennem påklædning fra top til tå - Undervejs får borgeren slukket for lyden og kan ikke finde ud af at tænde den igen.
Hvad skal prøvehandlingen give svar på/viden om?	- o For hver af de involverede parter : - hvordan opleves situationen? - er det trygt? - hvilke fordele og ulemper er der? - er der særlige opmærksomhedspunkter - o Specifikt i forhold til teknologien: - Hvordan fungerer brugergrænsefladen for borgeren - Hvordan fungerer brugergrænsefladen for medarb. - Hvordan understøtter systemets planlægningsværktøjer behovene hos borger/medarb. - Hvordan understøtter systemet behovet for adgang til data på borgeren	Hvad skal prøvehandlingen give svar på/viden om?	- o For hver af de involverede parter : - hvordan opleves situationen? - er det trygt? - hvilke fordele og ulemper er der? - er der særlige opmærksomhedspunkter - o Specifikt i forhold til teknologien: - Hvordan fungerer brugergrænsefladen for borgeren - Hvordan fungerer brugergrænsefladen for medarb. - Hvordan understøtter systemets planlægningsværktøjer behovene hos borger/medarb. - Hvordan understøtter systemet behovet for adgang til data på borgeren	Hvad skal prøvehandlingen give svar på/viden om?	- o For hver af de involverede parter : - hvordan opleves situationen? - er det trygt? - hvilke fordele og ulemper er der? - er der særlige opmærksomhedspunkter - o Specifikt i forhold til teknologien: - Hvordan fungerer brugergrænsefladen for borgeren - Hvordan fungerer brugergrænsefladen for medarb. - Hvordan understøtter systemets planlægningsværktøjer behovene hos borger/medarb. - Hvordan understøtter systemet behovet for adgang til data på borgeren

Kræver prøvehandlingerne nogen forberedelse?

Vi anvender badeværelset på Gundestrupgård som prøvemiljø o Christina fremskaffer rekvisitter såsom: tandbørste, krus, håndklæde, vaskeklud, håndsæbe, kam., tøj, lille bord, hvor borgeren kan lægge sine ting o Arbejdspapir til at notere på undervejs (hvis 3 personer: de to gennemspiller scenariet, tredje person tager noter) o Ekstra arbejdspapirer til notering ifm. ekstra scenarier, som gruppen måtte finde relevant at afprøve

Hvem skal lave prøvehandlingerne og hvornår?

Prøvehandlingsgruppen
Tor 26. oktober 2023 kl. 13-15.30



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Simulations in the Living Lab



The Result: New e-services

The social services

- Food preparation
- Personal hygiene

Health Services

- Medication administration
- Fluid intake
- Examination and measurement of values



Niveau 1: Borgeren kan selv med den/de rette hjælpemidler

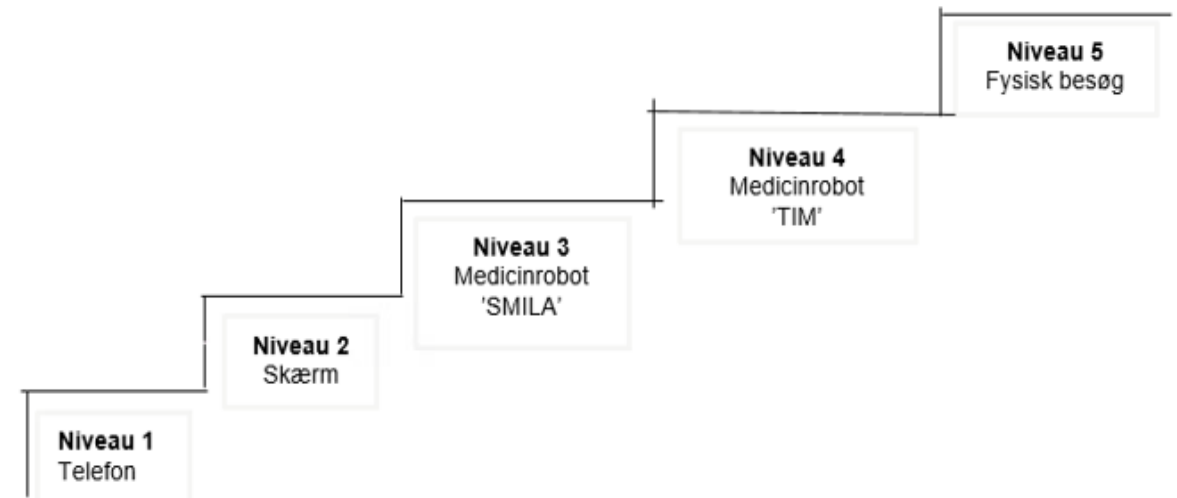
Niveau 2: Borgeren kan selv hvis de bliver mindet om hvad og hvornår via telefon

Niveau 3: Borgeren kan selv med delvist eller hel guidning via skærm

Niveau 4: Borgeren skal have fysisk hjælp til at udføre aktiviteten

Medicinadministration

Borgeren kan modtage hjælp til medicinadministration ud fra de 5 nedenstående niveauer.



What have the the simulations provided us with?

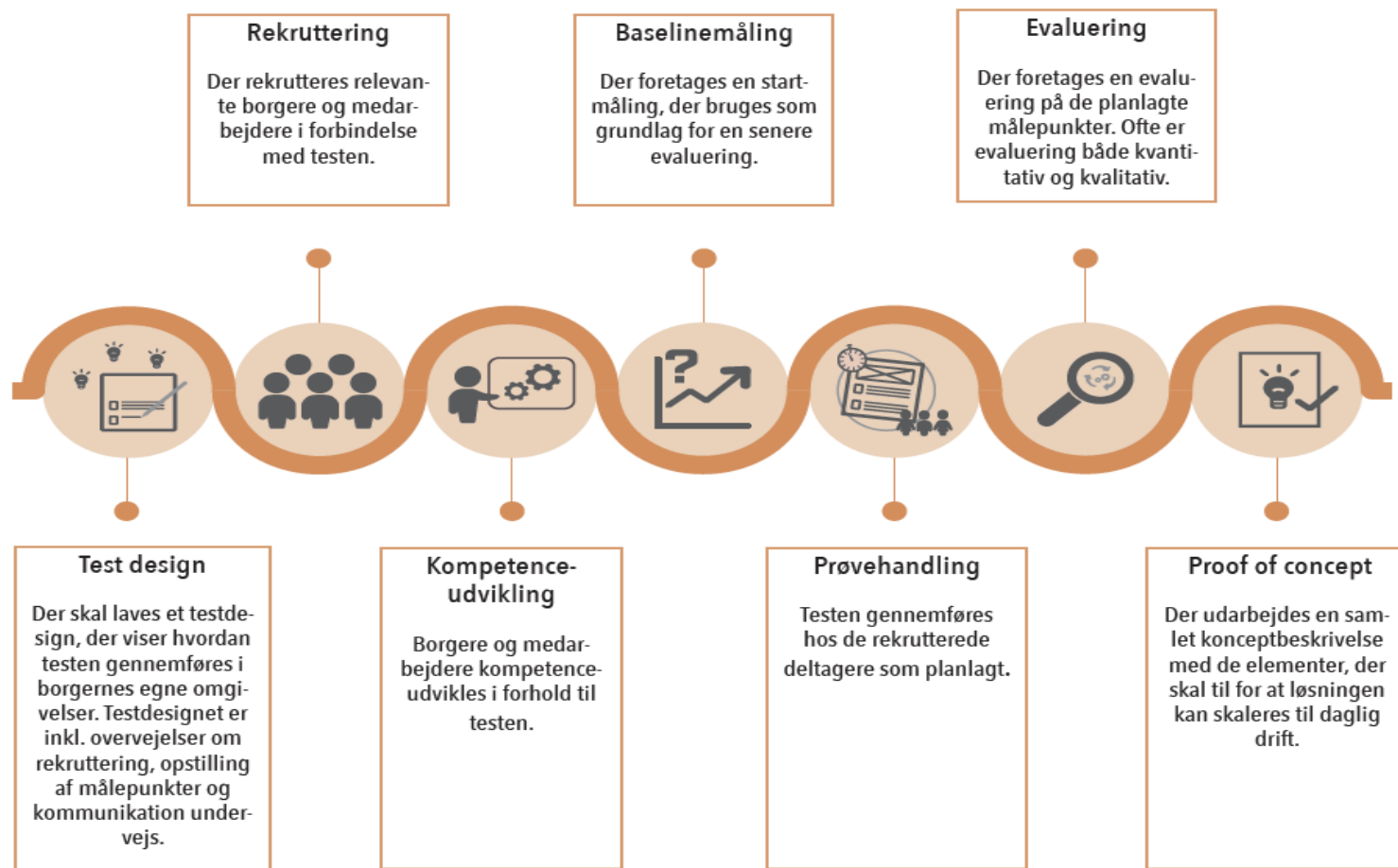
- To select the technologies on an informed basis
- To select right services for further implementation
- Created a basis for the description of the new services
- Points of attention for future workflows



→ In short: Securing correct implementing of Welfare Technology in a municipal context

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Fase 6 Prøvehandling



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Sixth phase: Trial actions

The citizens

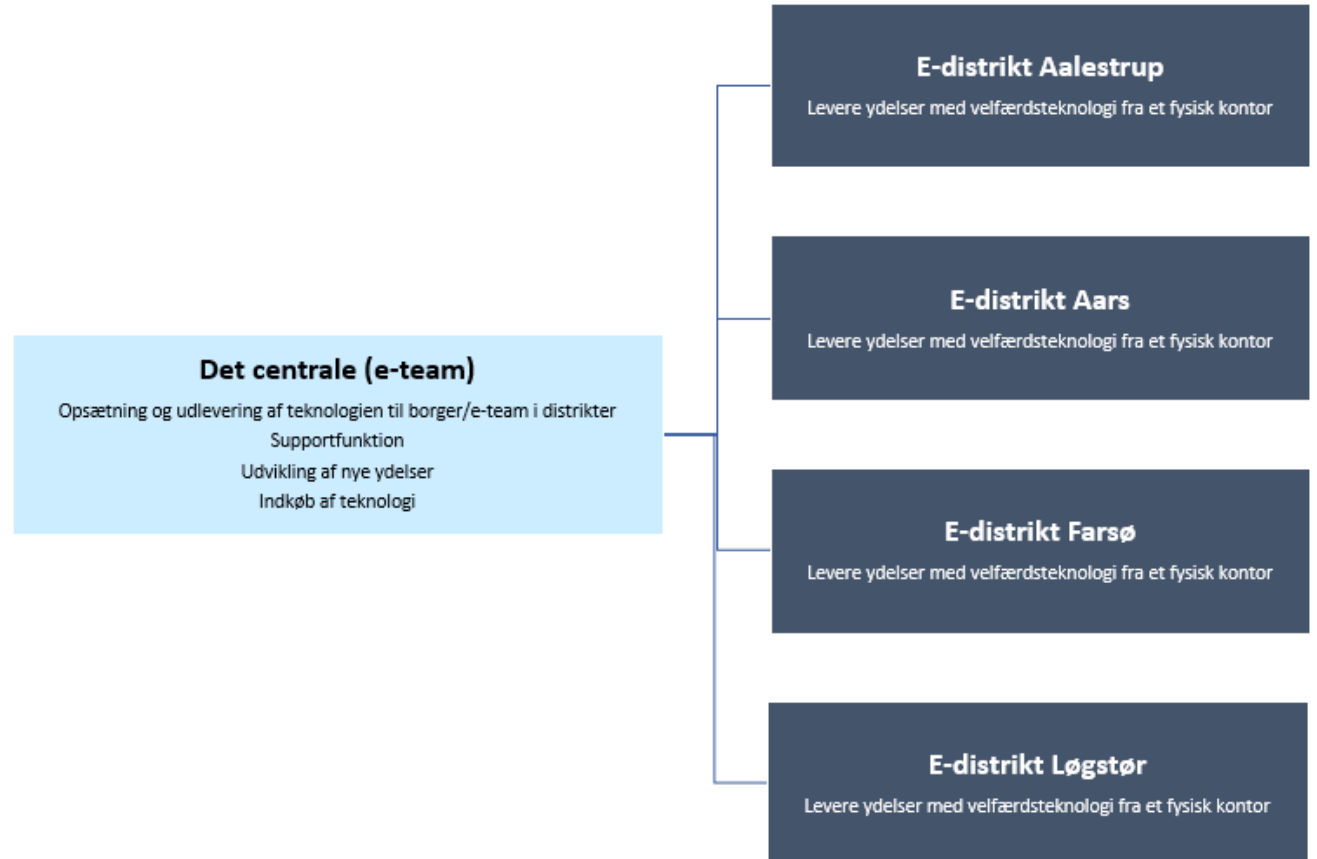
- Screening the citizens
- Getting the citizens involved
- Informing the citizens

Organizational setup

- Finding employees for the "e-districts"
- Teaching the workflows for the various technologies
- Cooperation between the districts

Documentation

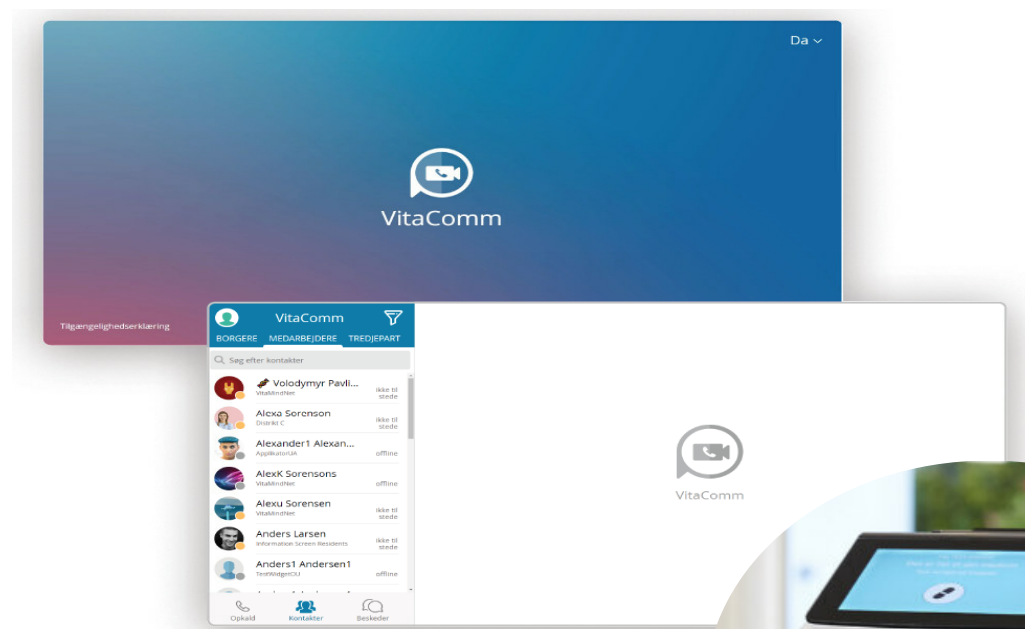
- Describing workflows
- Documentation for the Electronic Care Record
- User manuals





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Technologies



Screen visits

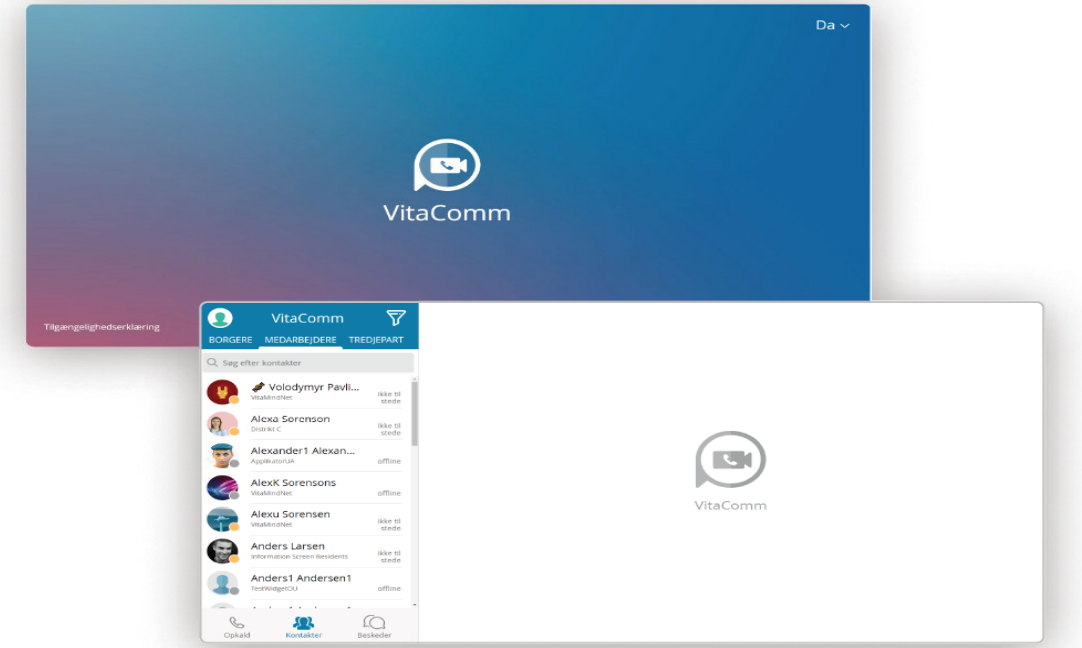
We use the App: VitaComm

The home and nursing districts

- The citizens receive a tablet from us with an app installed.
- 11 citizens have a screen where they receive e-services

The psychiatry and disability area (center for empowerment)

- The citizens uses their own device
- Downloading the app
- Call and write to the empowerment coach
- 51 citizens have received help via a screen visit from March until now.
- A total of 227 appointments have been delivered through screen visits."



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Medication robots

Smila medication robot

- For dose-packed medication
- managing medication schedules by automatically dispensing the correct dosage at the right time
- 4 citizens have a SMILA robot



TIM – (Complete solution for Intelligent Medication Management)

- Medication 'normal in packages'
- Dispense the citizen's medication
- Deliver the medication at specific times
- 6 citizens have a TIM medication robot



AquaTime- The Intelligent Drinking Glass

The functions

- Can measure fluid intake (Based on a target for desired fluid intake)
- Can measure if the fluid is poured out
- Nudging needs can be set up with respect to lights and melodies. Replaces physical fluid charts.
- Provide insight into the citizen's drinking patterns.”
 - Pr. day
 - Pr. week
 - Pr. month



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Sensor diapers at nursing homes



- We use Abena Nova sensor diapers
- Currently at 3 nursing homes
- The next step is within the Social Services sector



VR at nursing homes and in the Social Services sector



- 15 VR goggles in the Social Services sector
- 4 VR goggles at the nursing homes

Possibilities

- Recreate memories
- Mindfulness
- Nature experiences
- Coping strategies



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Other projects involving Welfare Technology and the Living Lab

European projects:

Interreg
North Sea



Co-funded by
the European Union

The ACE Project

- January 2023 through June 2026
- [ACE projektet \(vesthimmerland.dk\)](https://vesthimmerland.dk/ace-projektet)

The InnoCompTec Project

- September 2023 through August 2026
- [InnoCompTec \(vesthimmerland.dk\)](https://vesthimmerland.dk/inno-comp-tec)



Any questions?



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