Successful integrated care through a system change
South Karelia Social and Health Care District

Merja Tepponen, Director of Development, Eksote

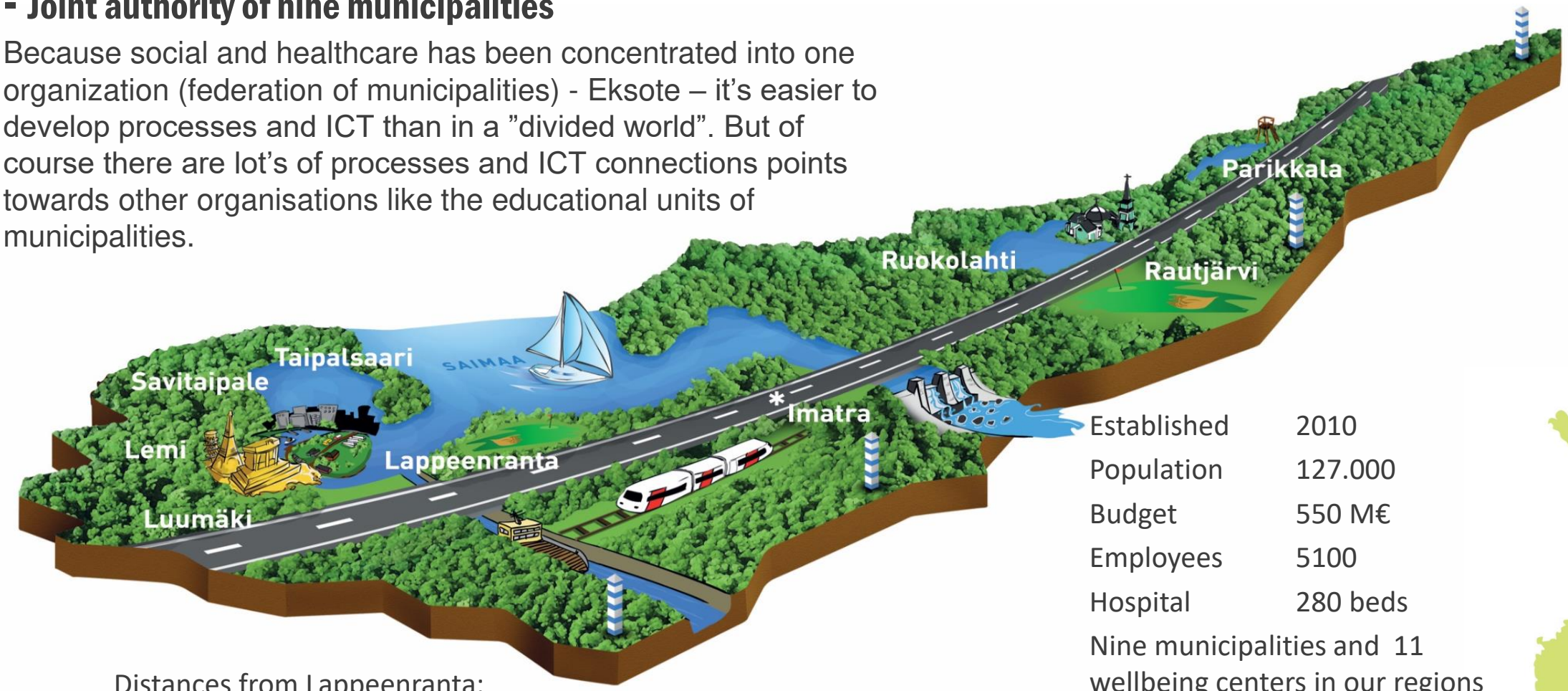
Content of the presentation

Little about the history of Eksote
Description of the current situation, successes and challenges
Transformation from a consortium of municipalities into a wellbeing services counties
Future visions

South Karelia Social and Health Care District, Eksote

- Joint authority of nine municipalities

Because social and healthcare has been concentrated into one organization (federation of municipalities) - Eksote – it's easier to develop processes and ICT than in a "divided world". But of course there are lot's of processes and ICT connections points towards other organisations like the educational units of municipalities.



Distances from Lappeenranta:

to Helsinki 230 km

to St. Petersburg 230 km

to Russian borders 35 km

Established	2010
Population	127.000
Budget	550 M€
Employees	5100
Hospital	280 beds

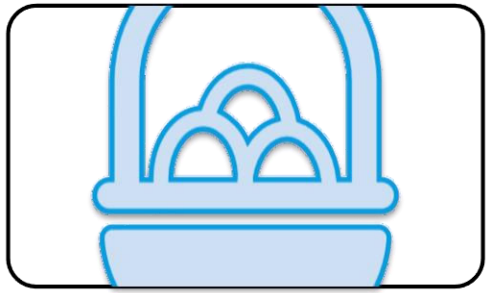
Nine municipalities and 11 wellbeing centers in our regions

Moving services, eServices

Home Care and service houses, Family and social service, rehabilitation

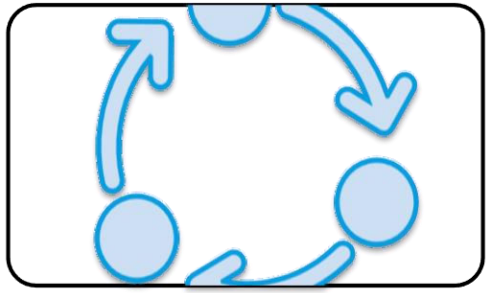
Little about the history of Eksote

Why EKSOTE



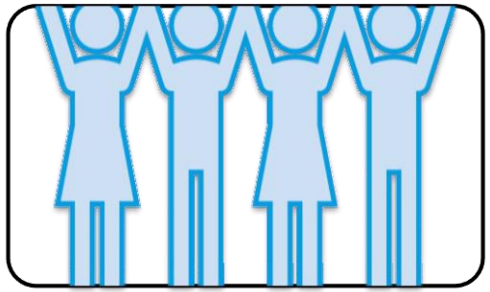
Traditional arguments for integration:

- Integration between the acute hospital, primary care and social well-being services
- A new and better balance between primary care and the hospital
- Better coordination strategy, financing and investments
- Joint use and recruitment of staff
- Sharing of resources
- Strengthen the steering power of the owner municipalities



Future arguments for integration:

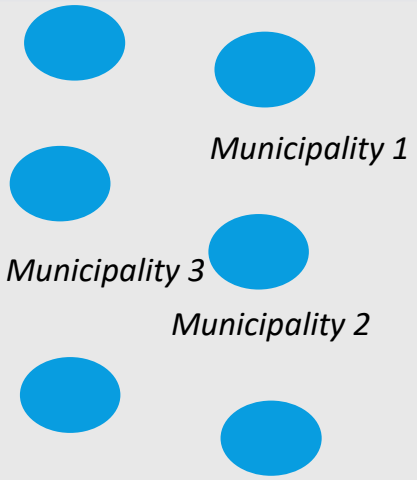
- Added value comes from data
- Use of data and data analyzing
- Artificial Intelligence, robotics, machine learning
- Create out-of-hospital services and autonomous work



Integration allows us to develop customer-oriented and cost-efficient processes across different operational areas and seizing the advantage digitalization can provide.

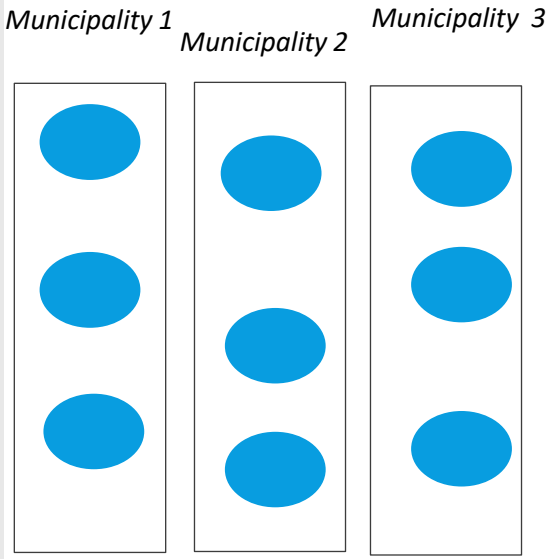
PHASES IN SERVICE DEVELOPMENT

DIFFERENT UNITS IN HIERARCHY



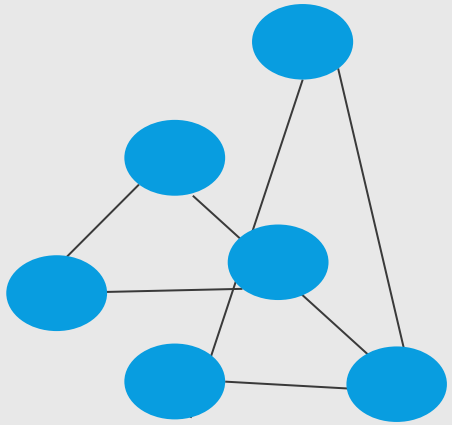
- Added value comes from hierarchies
- Municipal-based structure
- Main focus is on professionals and organization

ADMINISTRATIVE INTEGRATION



- Added value comes from economics of scale
- Contract based operation structure
- Main focus is on professionals and organization

FUNCTIONAL INTEGRATION



- Added value comes from data
- Functionally integrated structure
- Utilization of digitalization is beginning

ECOSYSTEM OF ACTORS

eksote Kela

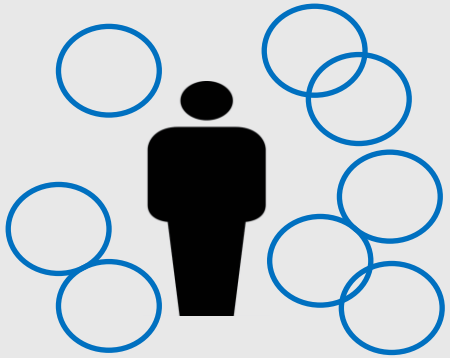
TE-palvelut tjänster | services

Private companies

Third sector

- Added value comes from data analyzing and artificial intelligence
- Orchestrate the whole ecosystem by AI with person level data - main focus on the citizen

ECOSYSTEM OF THE CUSTOMER

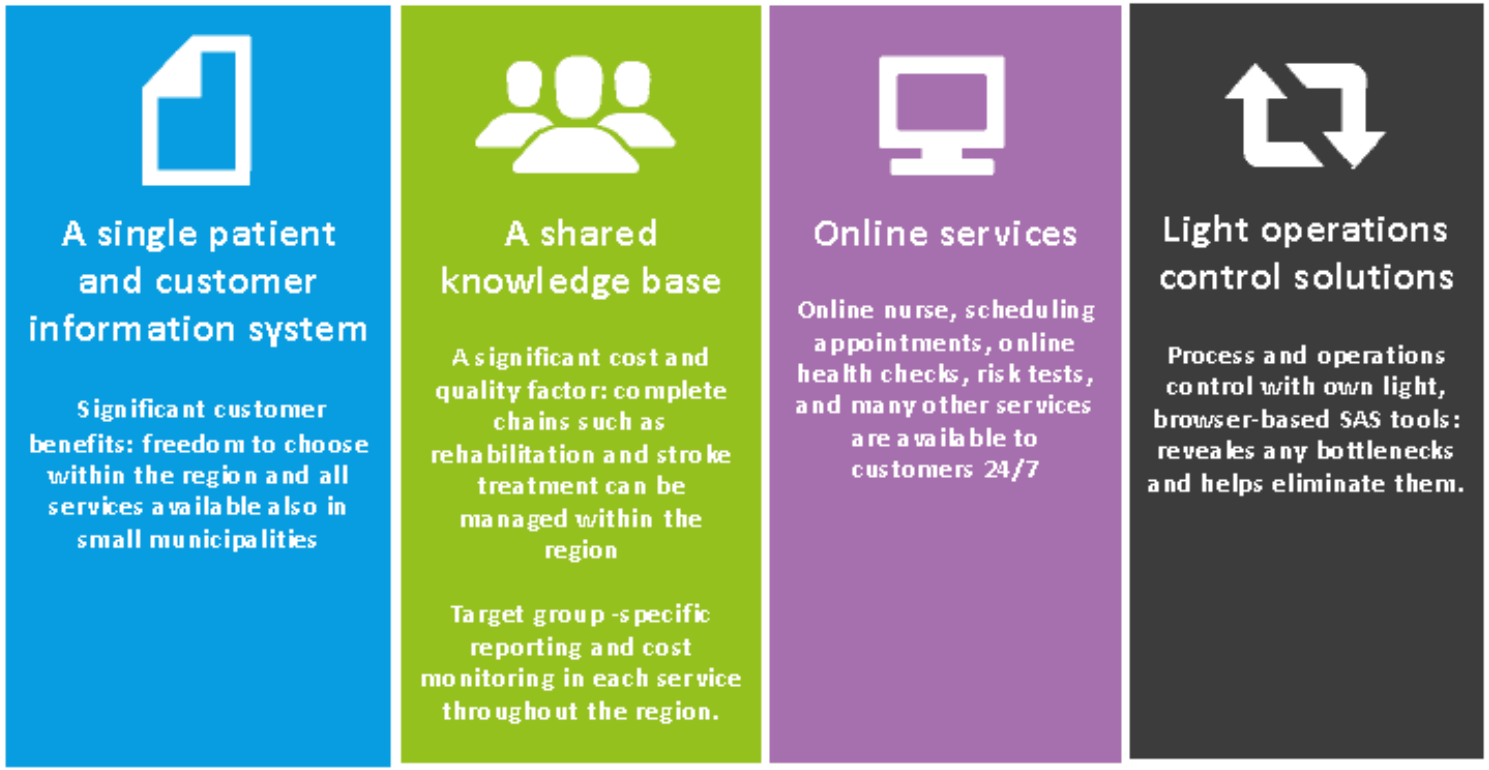


- Added value comes from personalized data analytics and AI
- Emphasizes customer's own responsibility, activity and customer experience. Customer owns data
- Network of networks where organizations' interfaces have to be open according to customer's needs

STRATEGICAL TRANSFER - AUTONOMY

First steps...

Digitality supports the development of the entire service system



Eksote's vision
"*Making it easier to cope at home, at work, in life*" accentuates the active role of customers and patients in maintaining their health and wellbeing and leading their own kind of life

New kind of Health-Care Center with social elements

eksote

Old model

- Several nurses
- Several doctors
- Concentrating mainly on illness and diagnosis
- Social work and health-care working mainly separate
- Wards

New model ("Welfare center", fi. Hyvinvointiasema)

- Multidisciplinary teamwork
- Remote doctors by appointment
- Some specialized nurses (recipe nurses etc.)
- Social workers
- eServices
- Co-operation with different health and social care associations and companies
- Theme-events, preventive groups
- Rehabilitation at home, living longer at home
- Supported housing/service housing
- Mobil Clinic
- Sport instructor / physical education

Second steps...

MOBILE SOCIAL AND HEALTH CARE SERVICES – A MOBILE CLINIC

eksote

I First 2010
Mallu Mobile Health Care Clinic

III third 2016
EMS Home Mobile Clinic

II Second 2014
Laboratory Malla

Home rehabilitation

We have developed homerehabilitation in Eksote since 2010. At the beginning we didn´t have much staff to work on the field and that´s why we started to support home care workers to sustain customers functional ability. This is very important also today thouhg we have much more resources and our interventions provided by rehabilitation professionals are very intensive.

Strategically the main point has been brave change from institution based models to home based models. We have moved our nurses duties to physio- and occupational therapists duties. We have integrated our processies and put the effort to early stage. We have decided to work multidiciplinary in all our processies.

Now we want to discharge very rapidly and straight to home if possible. We want to develop wide customer management solutions in the future to improve our processies.

Home Care and home rehabilitation

Preventive Services

Service guidance

Multidisciplinary evaluation of service needs

- Vaccination
- Nutrition
- Exercise

Household service at home

Assistent housing

Different service house

Every-day-services

Long- term home nursing care and homecare

Acute home care

Preventive services and home rehabilitation

Eksote in practice – current situation

The costs and population change in South Karelia during 2017-2040

Integrated regional Service Network

24/7
116117

Acute Care Hospital with Extensive selection of emergency medical care

Teleconsultations and online-services

24/7 nursing home and service House

24h/h Care

Low threshold service clusters for children, youth and families, adults, elderly and disabled; multidisciplinary services, "one-door"

Promotion of well-being and health, service instructing

Near-by-services such as social and health care centres (wellbeing centres), maternity clinics, school health care, home care 24/7, multidisciplinary home rehabilitation, stand-by urgent care, housing services (short- and long- term), assistance services

Mobile work
Mobile clinic

Yksityiset palvelut

Eksoten hyväksymät yksityiset hyvinvointi-palvelut ja hinnat yhdestä osoitteesta!

www.yksityisetpalvelut.fi

Yksityiset Palvelut

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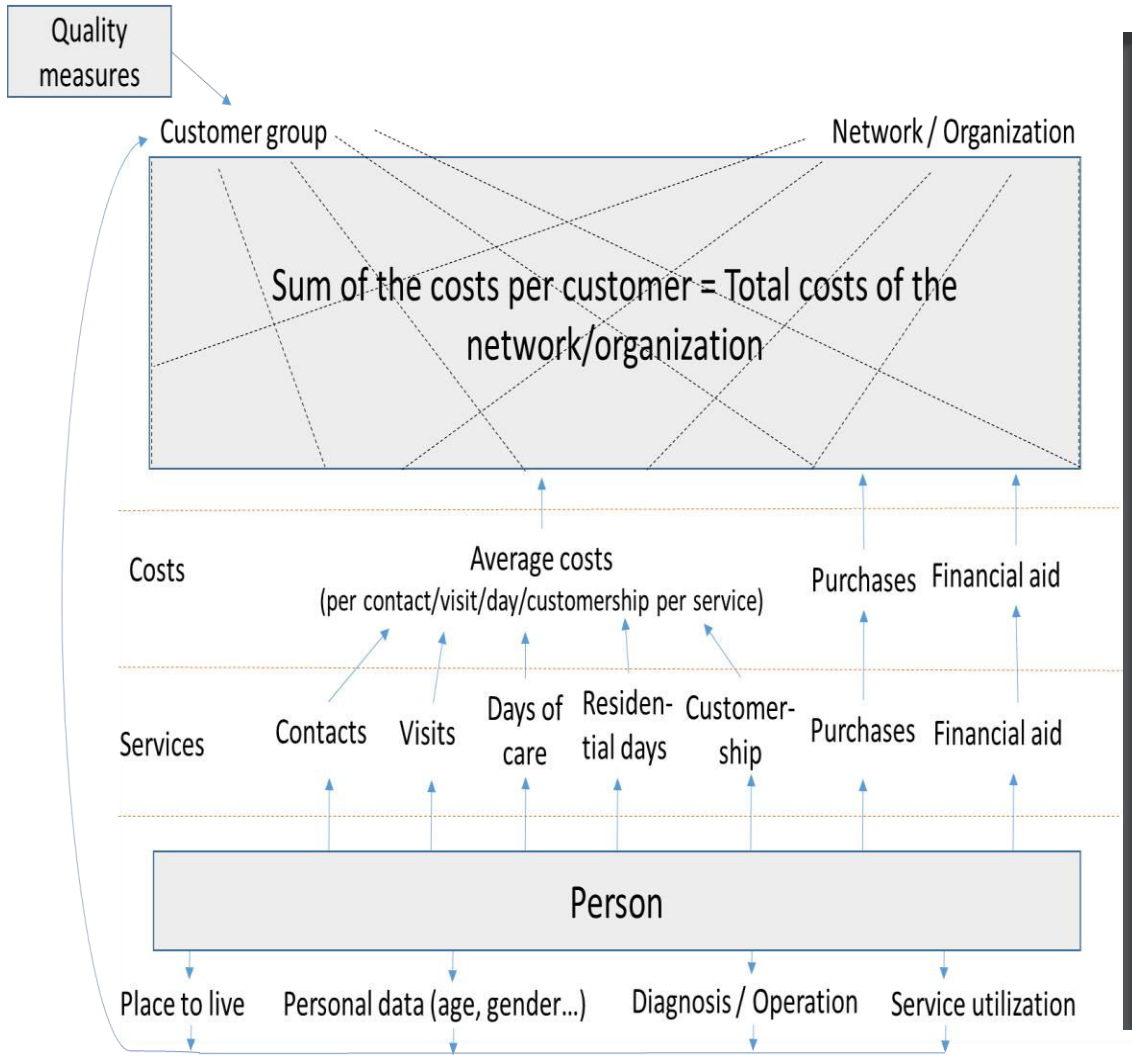
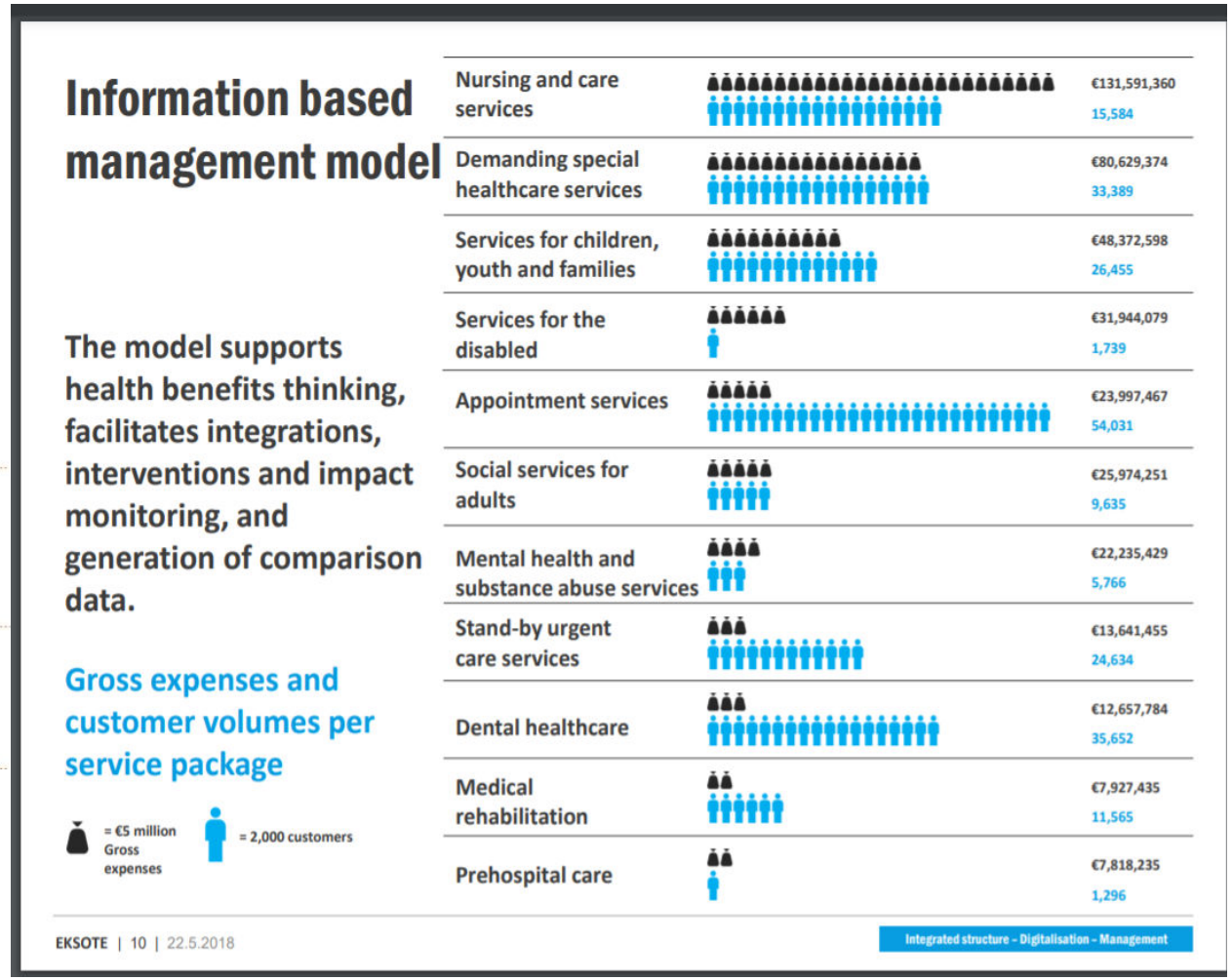
Private services

Age-friendly cities and region

Services to support living at home

INTEGRATED DATA MODEL OF EKSOTE

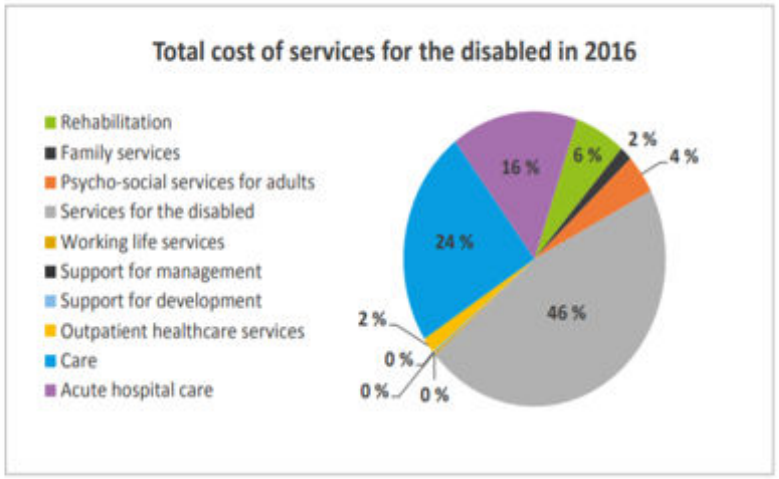




INTEGRATED DATA MODEL OF EKSOTE

Customer group-specific examination: e.g. customers using services for the disabled

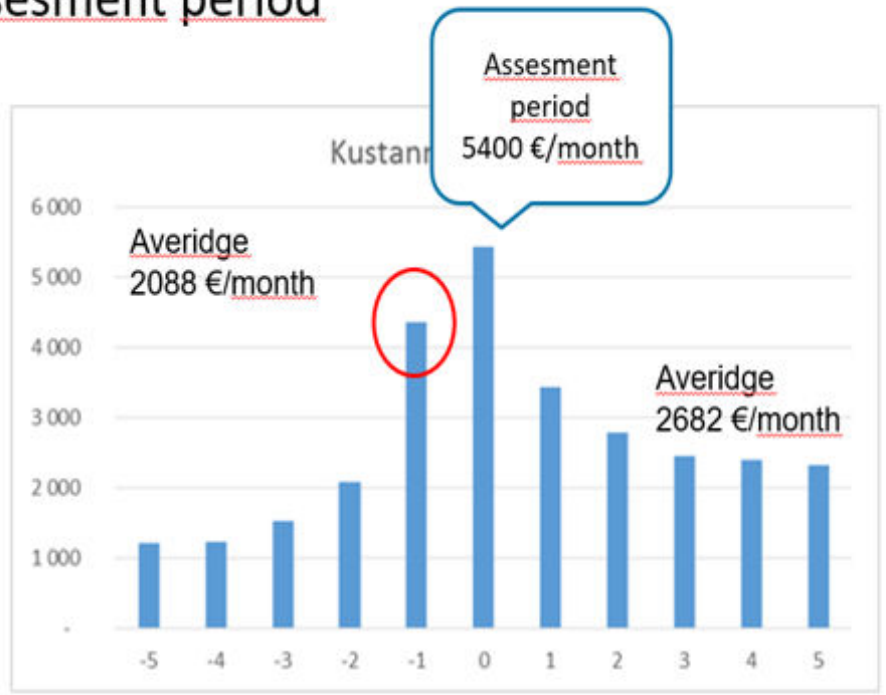
- Budget of services for the disabled: approx. €36.6 million
- Total cost of customers using services for the disabled in all services approx. €76 million



Care, acute hospital care and rehabilitation account for 38% of total costs

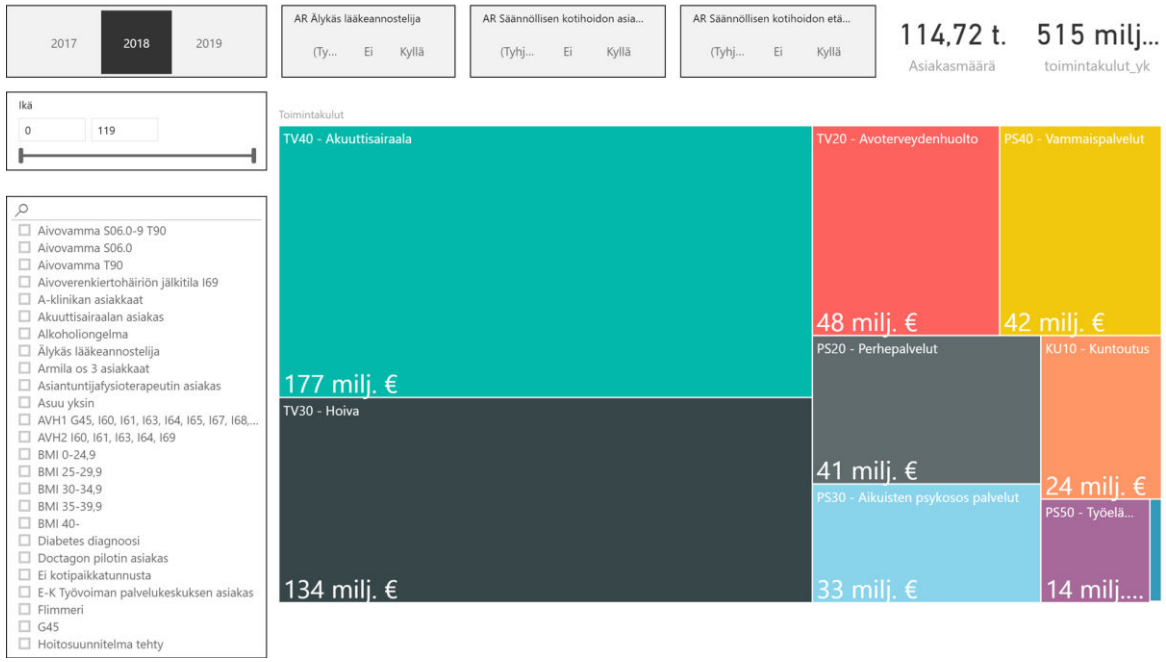
Integrated structure- Digitalisation - Management

All social and health care costs /person five months before and after Home rehalitation assesment period

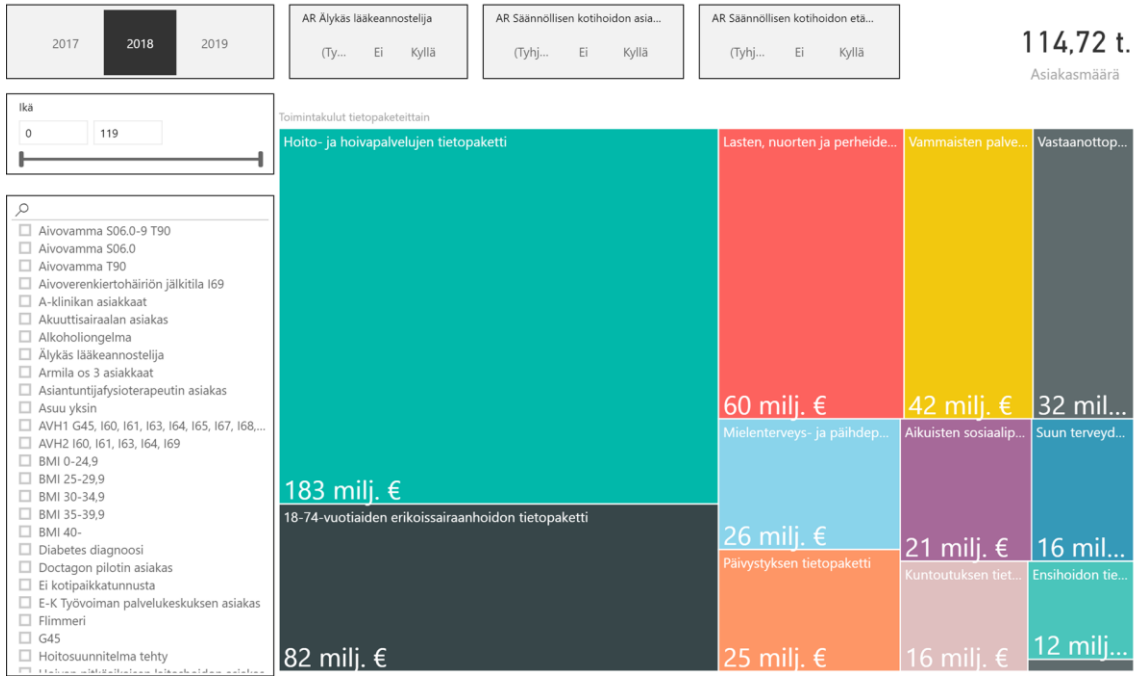


Five months before and after assesment period

From expenses point of view, elderly care is bigger than hospital operations



Eksote’s annual overall costs from organization or customer segment point of view



ENTITY OF SERVICES PROVIDED AT HOME

ACUTE HOSPITAL MODELS

- Centralized and digitalized consultation models
- Co-ordination - out of hospital services
- Enhanced and centralized homing

MOBILE EMERGENCY MODELS

- Mobile urgent assessment and treatment unit
- Home hospital services
- Multiprofessional co-operation

SUPPORTING LIVING AT HOME

- Home rehabilitation
- Early interventions
- Clinic van, mobile lab van
- Palliative and end of life care

Temporary services provided at home

Enhanced home care and palliative care

Continuous home care services

Foreseeing and preventive home care

JOINT COORDINATION

AMBULANCE SERVICE

- Eksote provides ambulance services throughout the region.
- 43% of all the interventions in paramedical care are evaluated/ assessed and treated at the scene, so that there is no need for transport to hospital.
- All procedures are done on the basis of physician´s consultation and general guidelines.

Stand-by urgent care at home

- Concept takes the emergency care know-how and tools to where they are needed
- Paramedical evaluation and care unit to reinforce the prehospital services.
- Estimation, examination, medication and care.
- Paramedics use point of care testing, for example: CRP, hemoglobin, cardiac enzymes, blood gas analyze, electrolytes, carbon monoxide and ultrasound.
- Possibility to reserve appointments.
- Additionally trained personnel.
- Own physician for consultation and developing service model.

THE AVERAGE COST OF DIFFERENT MODELS OF SERVICE PRODUCTION PER DAY

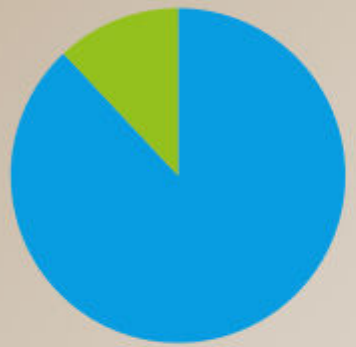
QUALITATIVE EFFECTIVENESS

No negative feedback concerning the Mobile on-call unit activity launched in March 2016.
Plenty of positive feedback from customers/patients and their relatives/close-ones.

Operation has been developed listening to the personnel. Personnel is committed and work satisfaction is on a good level.

Stakeholder satisfaction has been on a good level since the beginning. The operation has been developed according to stakeholder feedback. Feedback has been positive.

FINANCIAL EFFECTIVENESS



33%
Reduced costs

“I was happily surprised, when a nurse came to my home, contacted a doctor and I got the care that I needed without having to go to the ER.

JENNA KAARTINEN, PATIENT

Smarter Home Care

VIDEO-BASED REMOTE HOMECARE VISITS

Video-based remote home care visits

30-40 remote visits per shift
3-5 nurses per shift
Two shift per day
7 days per week

- Easy user interface
  - Between home care professionals and clients
  - between elderly and relatives or other stakeholders
  - Remote doctor to elderly home

End user story

Professional lead the discussion.
Meet with other elderly.
Could get help/information from professionals.

Meeri 84, lives 35 km from municipal centre. Home care visits once a month for distributing medicine

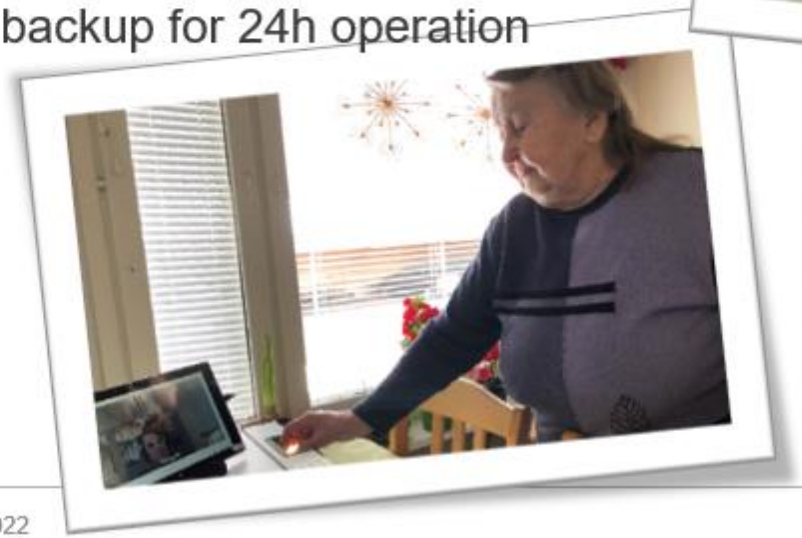
Physioterapist provide home rehabilitation and support Meeri in daily activities.

http://eksonet/tyotilat/5115/Julkinen/Kuvat/Niinim%C3%A4ki_video.mp4

Intelligent medicine-dispensing robot

https://www.youtube.com/watch?v=uGqvjoy6VKs

Capacity for 48 doses
The medicine doses in medicine cups
The amount of daily dosage is not limited
Right medicine at right time for customer
Easy to use
Remote access
Possibility of medicine modification at any time
Battery backup for 24h operation

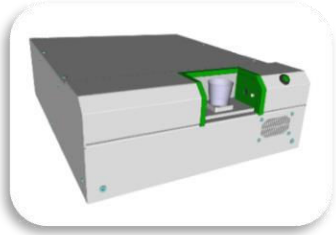


50 End users
5 Home care areas
All nurses on each area able to use a robot
Technical support for nurses

Smarter homecare

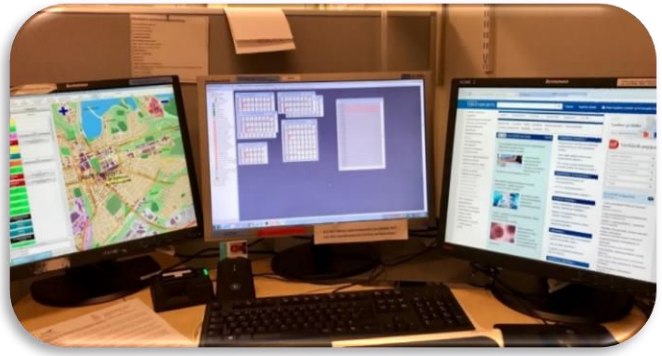
remote visits accomplished in 2021 meaning 5.7 % contacts made by home care.

Savings 500€ /month/ customer



Medication robot: Potential users approx. 36% of home care customers.

Up to 400-500€ /month savings per customer.



Coordinator has up to date information and situational awareness of service resources and service needs.

Previously the customers encountered paramedical services, emergency duty and finally were admitted to hospitals. Now approx. 70% of these interventions are treated more customer oriented and more cost efficient.

VIDEO-BASED REMOTE VISITS HAVE REDUCED EKSOTE'S SERVICE DELIVERY COSTS...

The overall cost of overall services used by customers who are part of continuous homecare are lower for those patients who are using remote connections.

...IN A WAY THAT HAS NOT INCREASED COSTS IN EMERGENCY SERVICES.

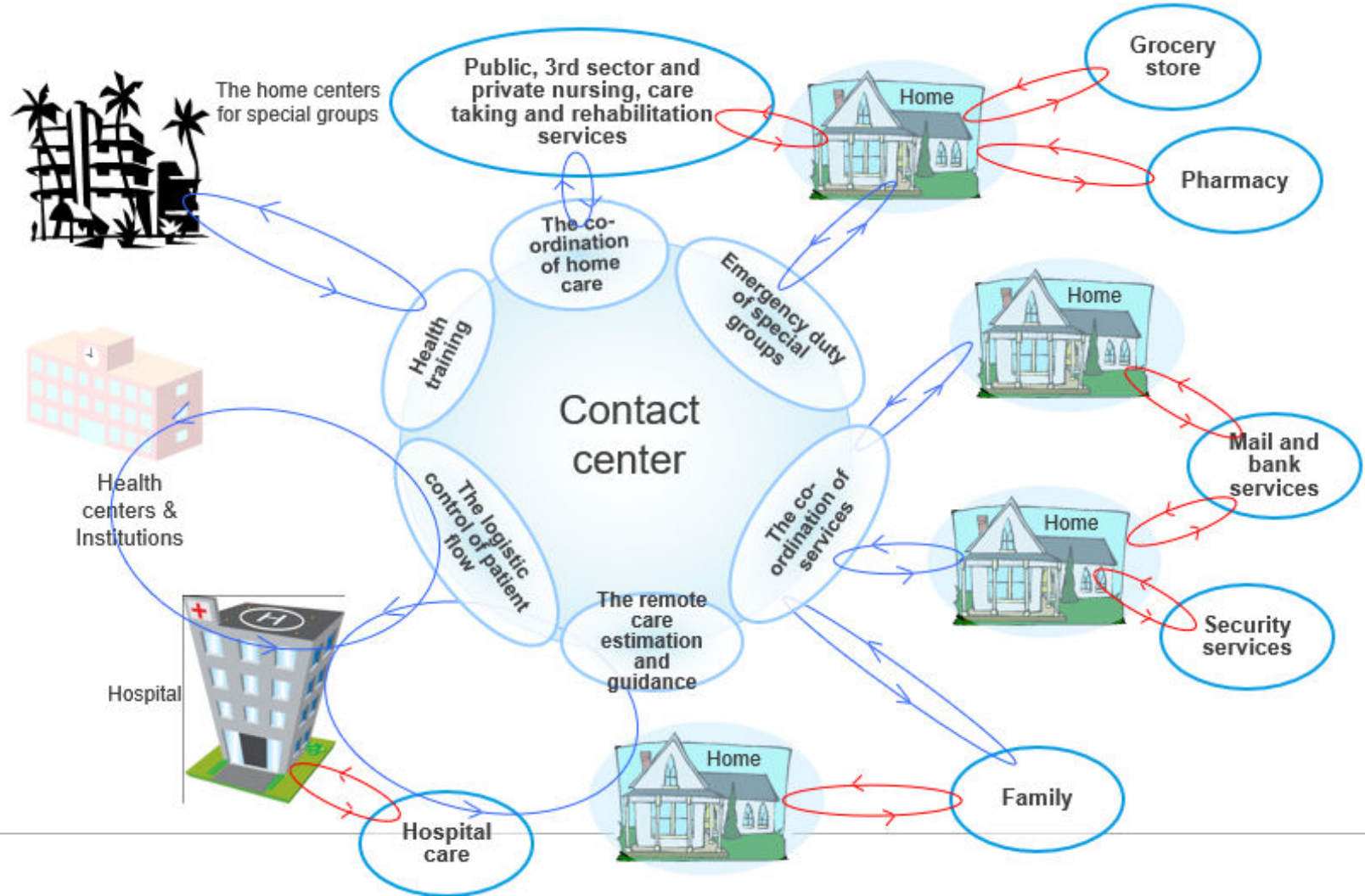
REMOTE VISITS			
Amount of clients [90 days before/after taking remote visits in use]	No visits at all	Before	After
Visits in emergency room (totally 253 users using eServices) at different professionals	157	107	102
Percentage of all event types	43 %	29 %	28 %
Percentage between before and after visits		51 %	49 %

When remote visits was taken in use, the amount of ER visits dropped 2 percentage units.

When medication robot was taken in use, the amount of ER visits dropped 6 percentage units.

MEDICATION ROBOT			
Amount of clients [90 days before/after taking remote visits in use]	No visits at all	Before	After
Visits in emergency room (totally 253 users using eServices) at different professionals	24	10	9
Percentage of all event types	56 %	23 %	21 %
Percentage between before and after visits		53 %	47 %

SUPPORTING THE COPING AT HOME IS NOT EASY TASK - IT'S ABOUT MANAGING THE WHOLE ECOSYSTEM



IoT IN HOME-LIKE ENVIRONMENTS TOMORROW

CUSTOMER

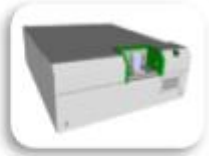
IOT SERVICE PLATFORM

AI

Home rehabilitation

Meal dispenser

Localization and safety.



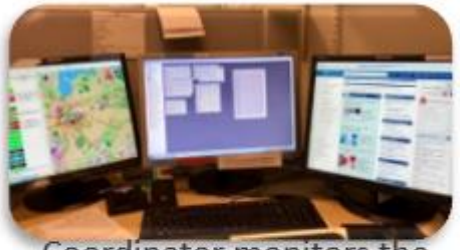
Medication robot

Monitoring vitals

Insulin pump

Nurses can plan their day autonomously.

The awareness and participation of relatives are improved.



Coordinator monitors the situation and makes the needed alerts.

Other parties. Third sector, fire and rescue, home help etc.

HOW TO COORDINATE CUSTOMERS SOCIAL AND HEALTH CARE SERVICES

Multidiciplinary assement

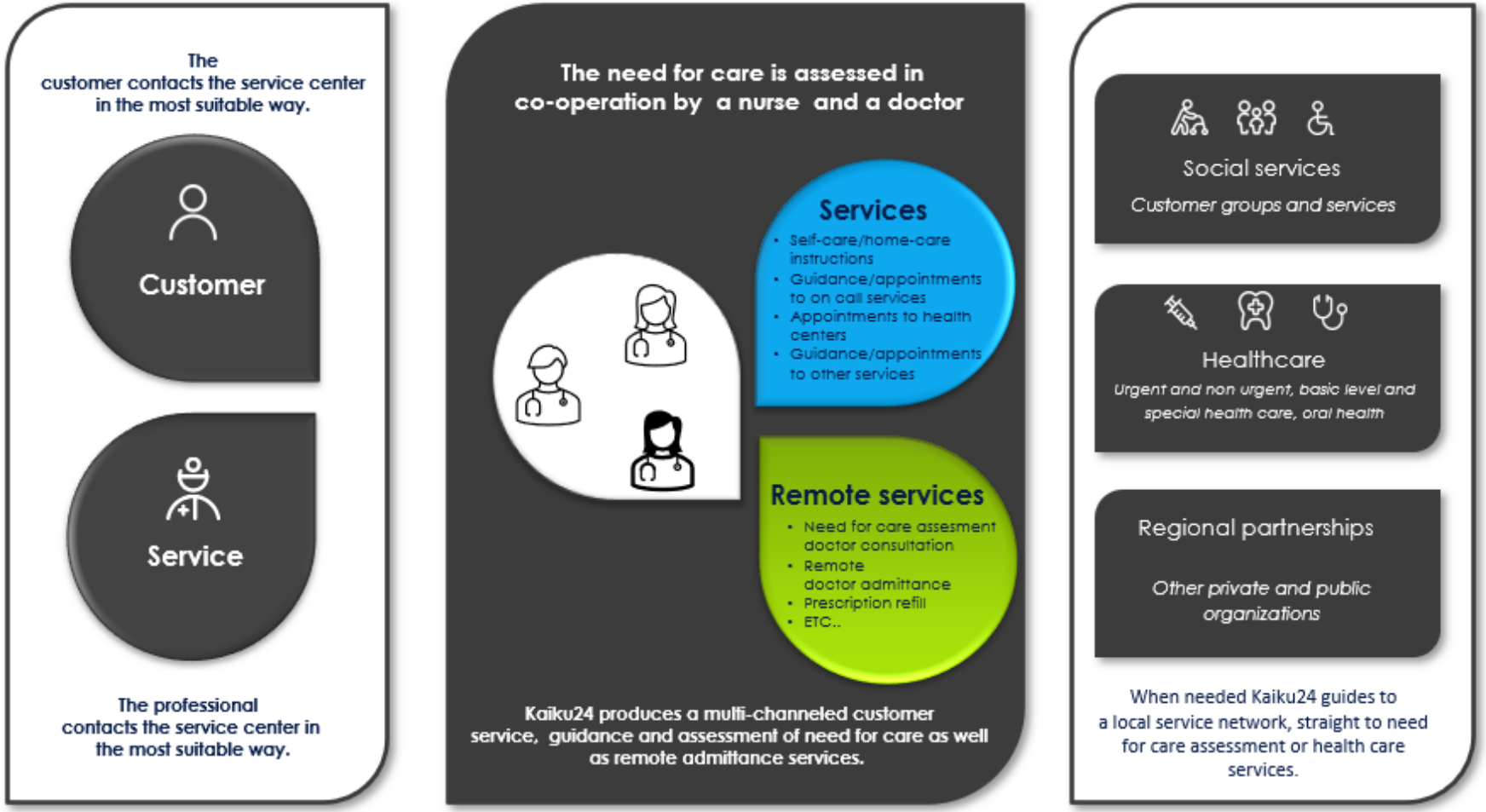
Customer self-assessment and data

Home -based services and data

Hospital, social- and health care centre assessment and data

And other data
Acting, planning and anticipation

Kaiku produces multi-channeled service 24/7



ELSA Testbed

- Social and health care innovation ecosystem
- Real-life or simulated testing enviroments
- Focus: in out-of-hospital

eksote

LUT University

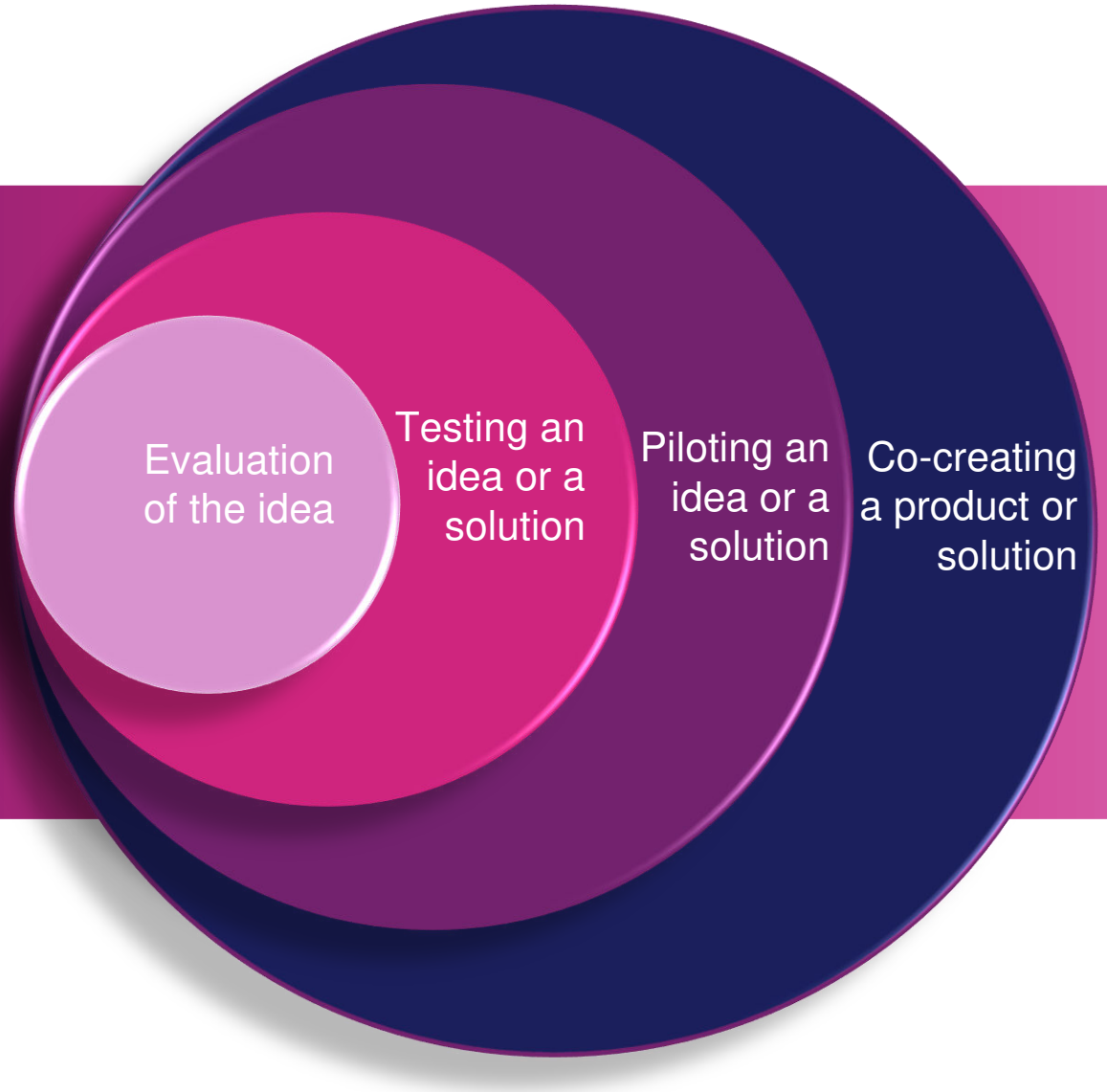
LAB University of Applied Sciences

Vipuvoimaa EU:lta 2014–2020

Euroopan unioni

We offer:

Testbed services:



New service, software and digital companies

New service and earnings models for companies

Business growth and internationalization

eksote KANSSASI

eksote

LUT University

LAB University of Applied Sciences

Vipuvoimaa EU:lta 2014–2020

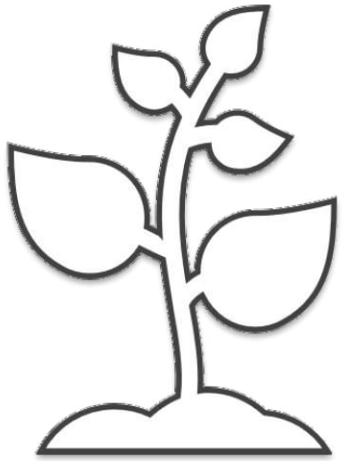
Euroopan unioni
Euroopan aluekehitysrahasto

Next steps

Social and Health Care reform 2023

2016 2025

Best practices to be regionally modified



The operational environment affects the means and ways to implement the change

Integration of services with bending boundaries can be done e. g. by

- **putting the customer first**
- creating a joint strategy and vision with strategic objectives
- using sufficient processes that add value and
- **by supporting professionals' work with right kind of premises, tools, management, and education.**

Customers' timely entrance in services and treatment will succeed with

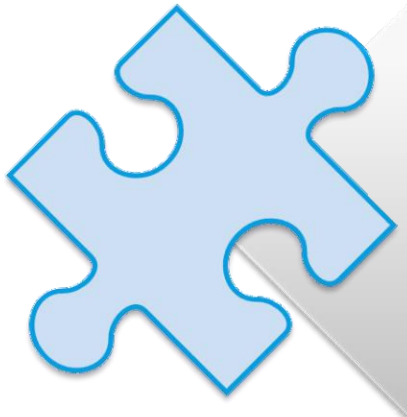
- optimized processes
- ICT services incl. one Patient and Customer Record System
- **service and treatment needs assessments at the right time with suitable tests and guidance**
- situational sense – what happens in and around the organization concerned and
- fulfilling regional aspects on services – create new ways to provide services to rural/remoter areas.

Personnel has an influence on work aiming at the shared vision. Everything is supported by **continual improvement** which is based on experiences, expectations and knowledge. One of the main key factors is that the **customer participates** in an active role.

Eksote Model's influence on the Finnish Social and Health Care Reform

The experience in Eksote is that there is a lot of potential also to reduce costs and at the same time provide more value and improve the quality of social and health care services at national and at provincial and regional level, as well.

- The largest cost savings resulting the fact that hospitals and other social services will have fewer patients and customers. Only those patients go to the hospital or use other services who really benefit the care. Digitalization in large scale is not to centralize services and provide great volumes. It's more to decentralize and provide value.



Agile development continues in Eksote: many of customer and customer-related processes have already been piloted, and there are many more to come. All in all, it's vital to add value to the customer with each change and each development step. Success in this makes also the other elements of service provision e. g. financials, personnel's happiness and efficiency even stronger.

What next? Social and Health Care reform in Finland **2023**

- The organisation of public healthcare, social welfare and rescue services will be reformed in Finland. The responsibility for organising these services will be transferred from municipalities to wellbeing services counties from 2023
- Under the reform, a total of 21 self-governing wellbeing services counties (+ 1 Helsinki city wellbeing services counties) will be established in Finland
- The highest decision-making power in each wellbeing services county will be exercised by a county council, whose members and deputy members will be elected in county elections. The first county elections will be held on 23 January 2022. The term of the first county council will start on 1 March 2022 and run until 31 May 2025.
- **Eksote together with rescue services will become one of these 21 self –covering wellbeing services counties: Wellbeing county of South Karelia 2023-**

Priorities of the health and social services reform

People-centred services
Services are developed so that one contact give access to the relevant service

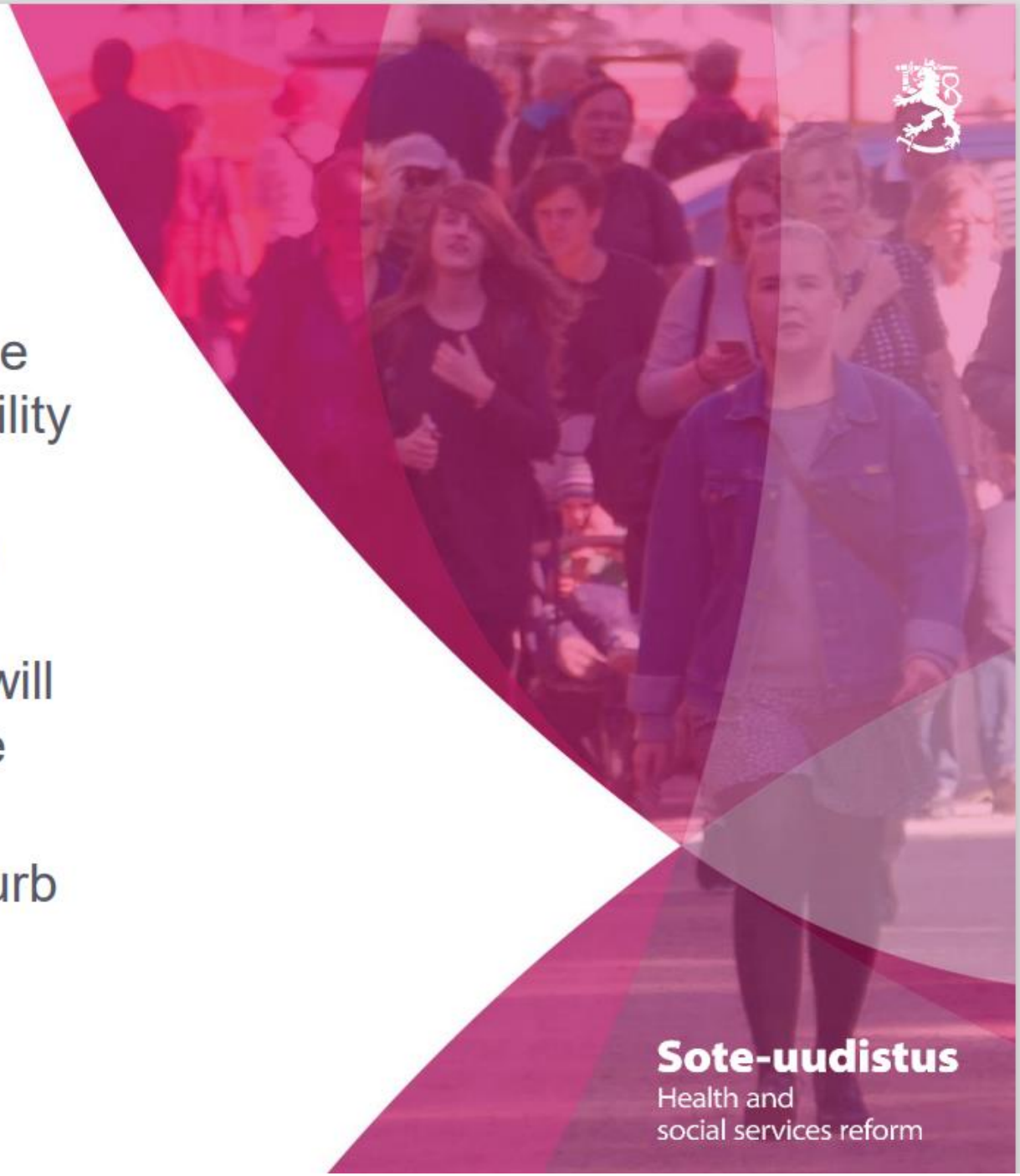
Participation
Decision-making stays close to you. Services are reformed in cooperation with residents

Wellbeing services counties have responsibility for services
One operator is responsible for ensuring that you receive the health, social and rescue services you need.

Sote-uudistus
Health and social services reform

Well-functioning structure will safeguard services for all

- Health, social and rescue services will be restructured to ensure the equal availability of services throughout Finland.
- Finland's population is ageing at a rapid pace and will need more services than previously. The decline in the birth rate will lead to a smaller number of working-age people and a reduction in tax revenue.
- Restructuring is necessary in order to curb the increase in costs and ensure equal health and social services for future generations.



New wellbeing services county structure 1 January 2023

Structure now

195

22

195 health and social services organisations
+ 22 rescue departments

New structure

22+1

22 health, social and rescue services organisations
+ Hospital District of Helsinki and Uusimaa

Sote-uudistus
Health and
social services reform

Division of duties under the reform, as of 1 January 2023

State
- guidance and direction
- funding

22+1
health, social and rescue services organisations + Hospital District of Helsinki and Uusimaa

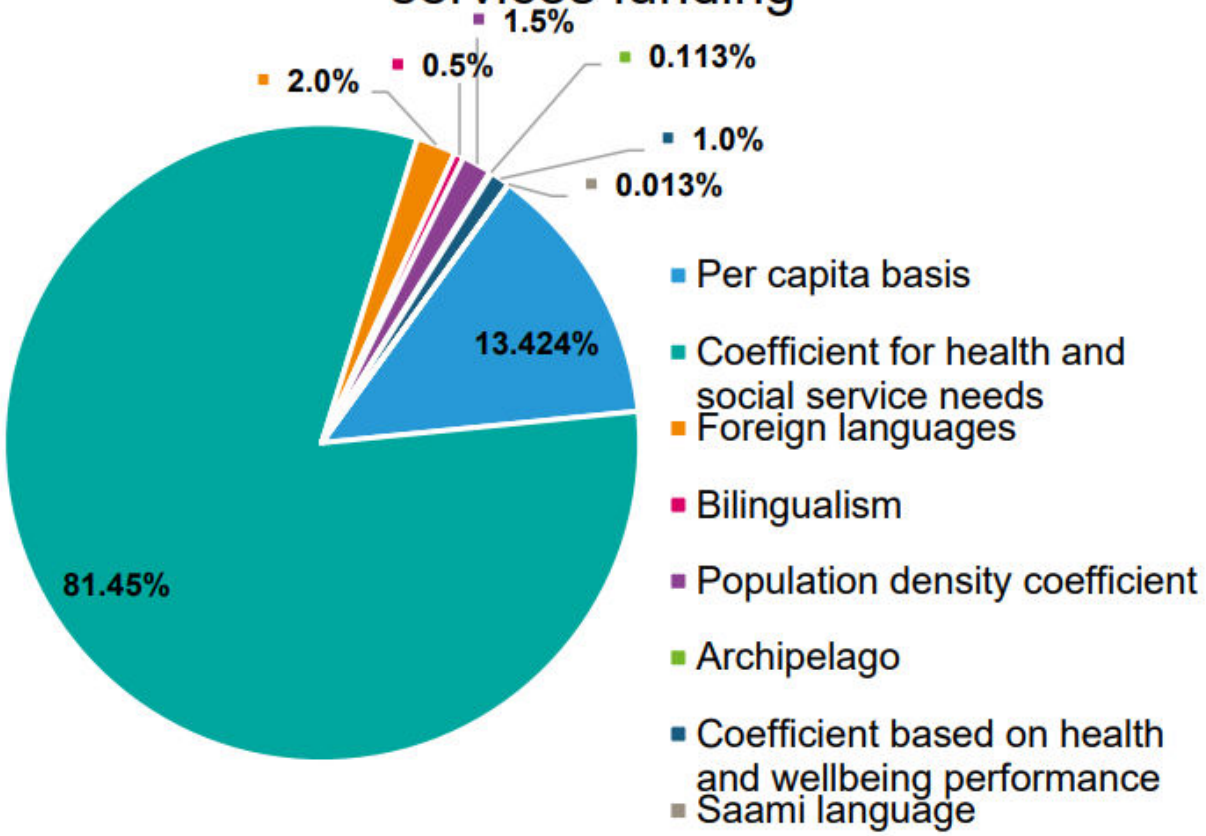
5 collaborative areas
division of responsibilities in specialised services

Strong role for the public sector
Private and third sectors complement public services

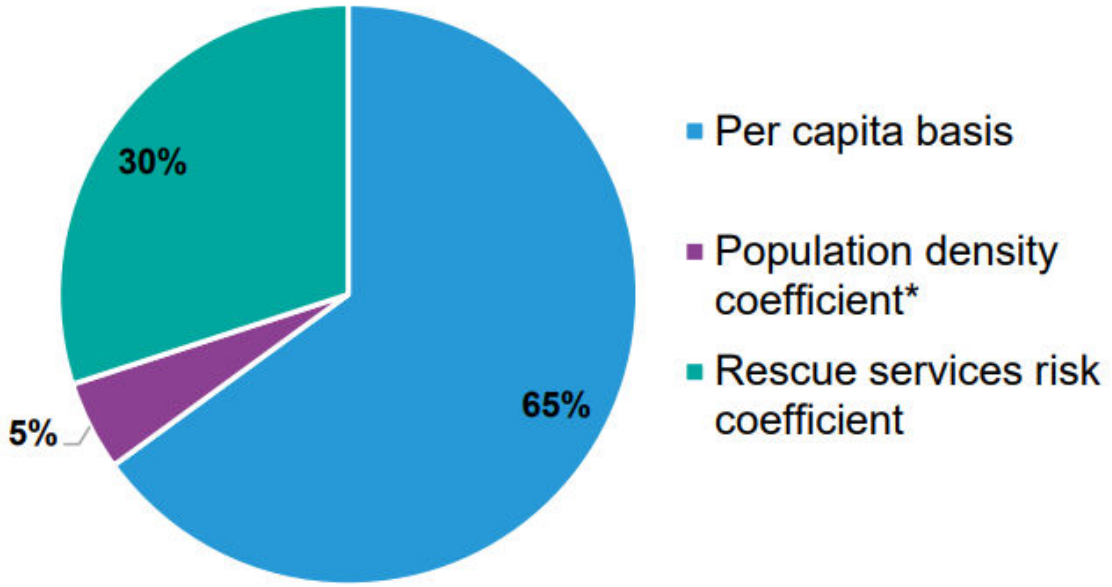
Sote-uudistus
Health and social services reform

Imputed funding model for wellbeing services counties

Factors determining health and social services funding



Factors determining rescue services funding



*Total area of wellbeing services county is used in determining population density coefficient for rescue services.

YOU CAN NOT EXPECT DIFFERENT RESULTS IF YOU THINK AND WORK AS YOU DID EARLIER

Information is useful only if it benefits customer or professional from the perspectives of service availability, quality, efficiency or cost-effectiveness!

Thank you for your attention!