

THE ECOSYSTEM TO BOOST YOUR BUSINESS

OULU HEALTH

www.ouluhealth.fi



Future Hospital OYS 2030

The smartest hospital in the world



OULU UNIVERSITY HOSPITAL





TULEVAISUUDEN
SAIRAALA 2030

1. Phase 08/2018-12/2021
New construction
Women's and Children's Hospital
"LaNa" 25 700 brm²/75,2 M€
Core Hospital 1. phase
"Cube" 20800 brm²/85,6 M€
Demolition works 4 M€



TULEVAISUUDEN
SAIRAALA 2030

2. VAIHE

1. VAIHE

2. Phase 2022 - 2026

Accident & Emergency
Radiology
Intensive Care
Surgery Clinics
Wards

n. 86 700 brm²/350 M€

Core Hospital 1-phase

- Women's and Children's Hospital
- Surgery, Radiology
- Wards

Core Hospital 2-phase

- Accident & Emergency
- Radiology
- Intensive Care
- Wards (incl. Rehabilitation)

Core Hospital further phases

- Cardiology and Neurology
- Diagnostics
- Polyclinics
- Rehabilitation
- Required wards

Other

- Outpatient center
- Teaching, Training, Research
- Patient Hotel
- Parking and Transport
- Future functions





School of social and
health care



Oulu City Hospital



OYS Psychiatry

Kastelli Research
Centre



Rehapolis



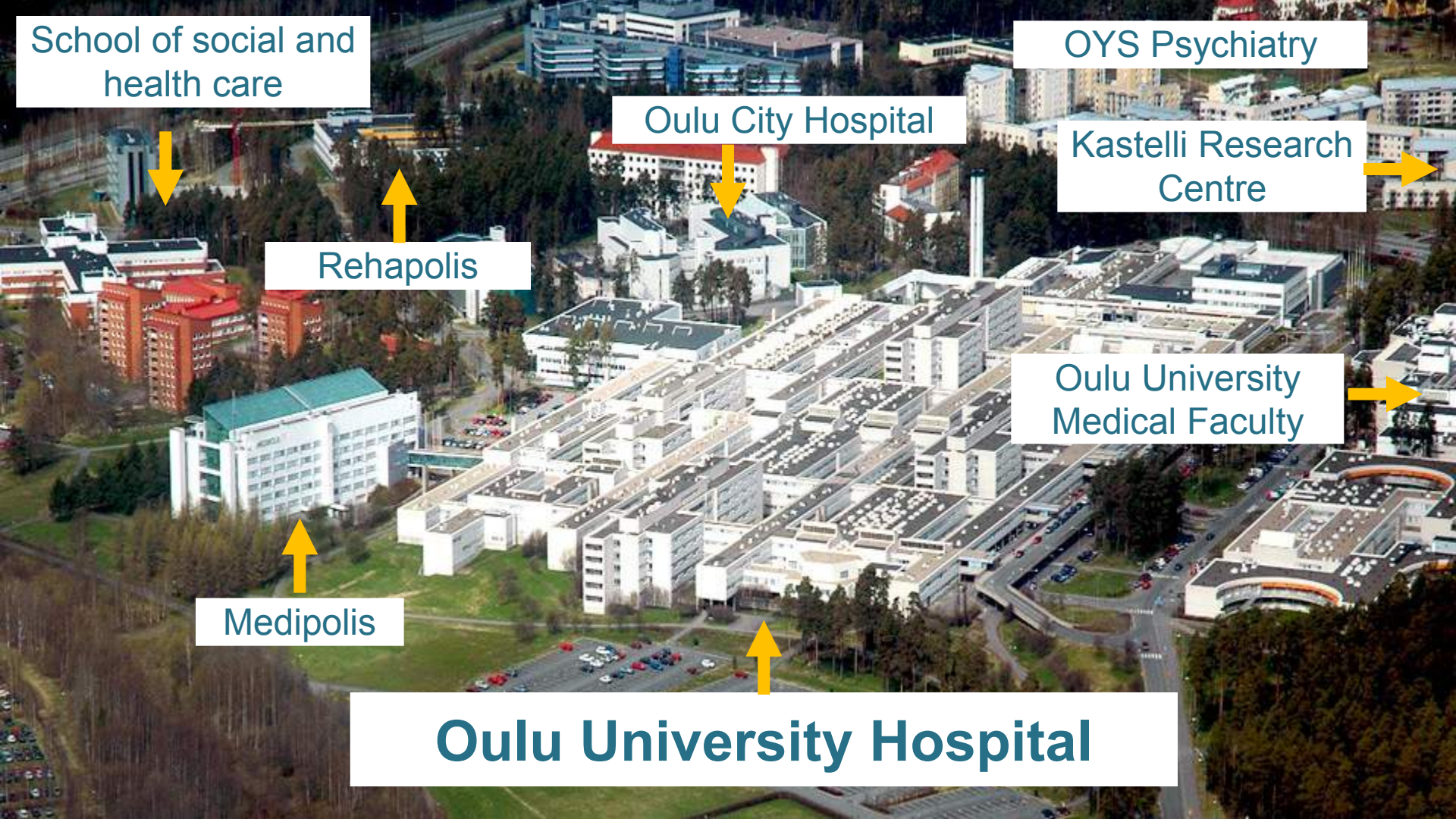
Oulu University
Medical Faculty



Medipolis



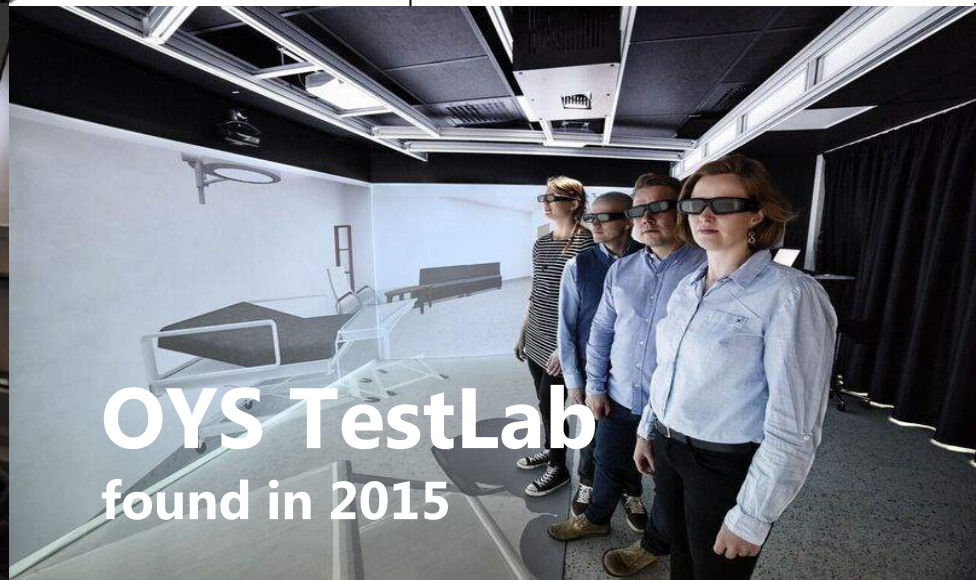
Oulu University Hospital



OuluHealth Labs

Innovation, testing and development
environment for companies and
healthcare professionals

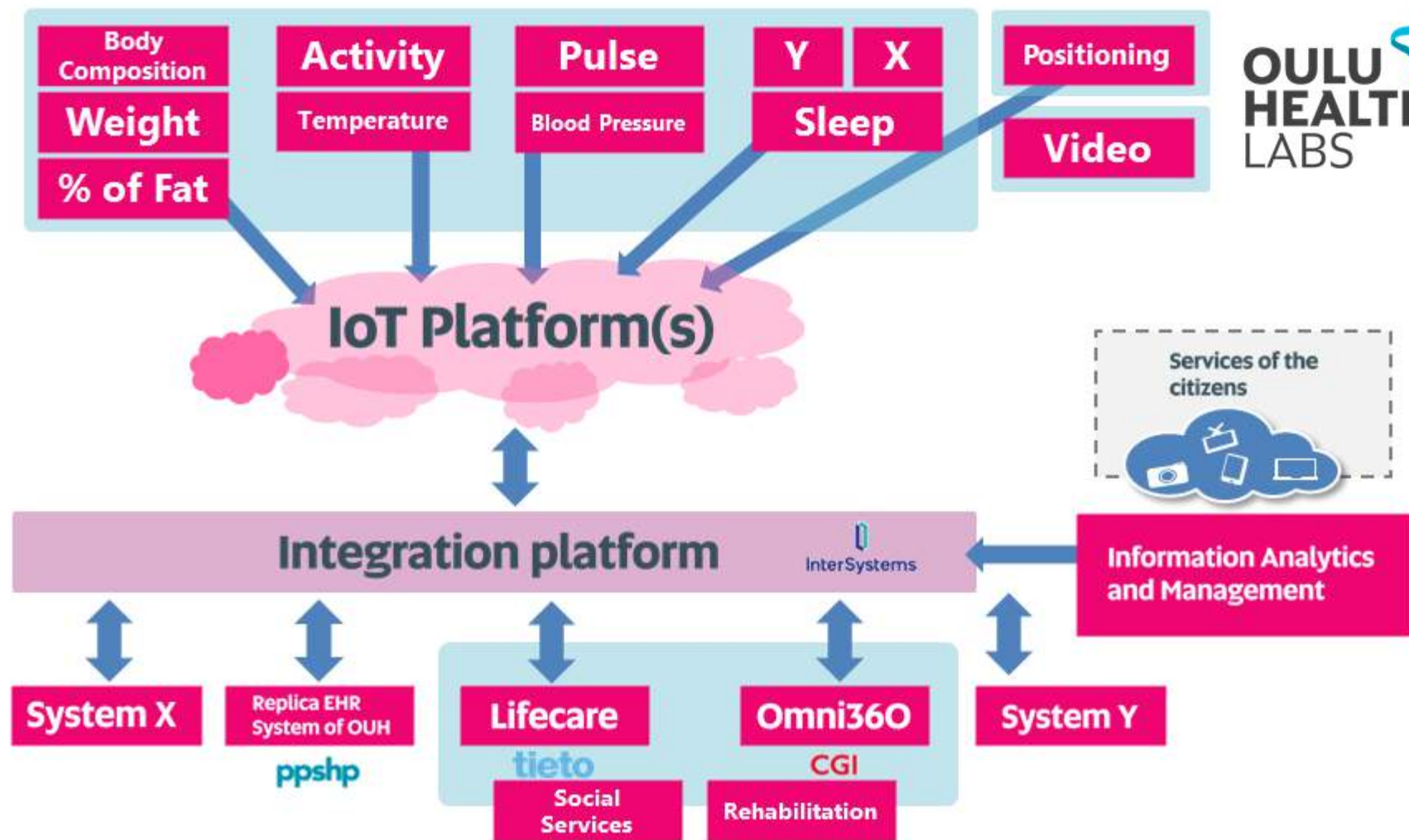




OuluHealth Labs Concept



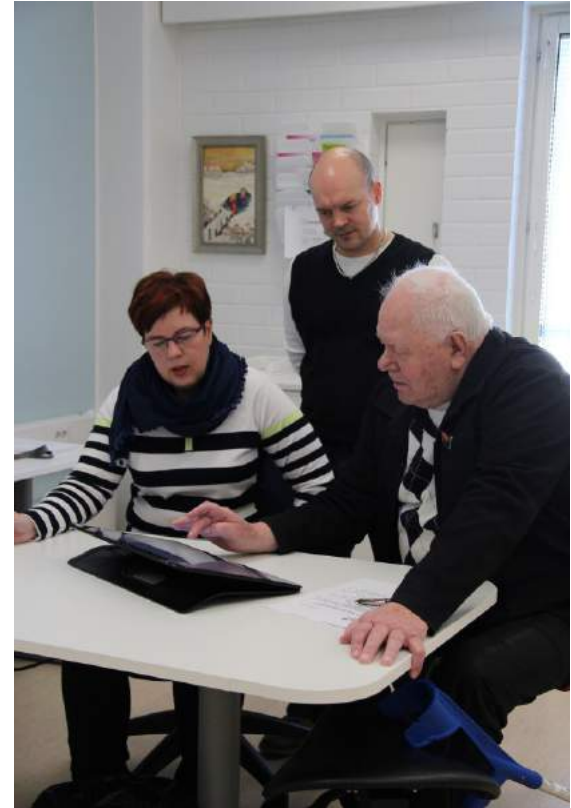
Research and Development



OuluHealth Labs in numbers



50+ completed pilots
100+ innovation sessions
120+ companies
2000+ people involved



OuluHealth Labs in video

OuluHealth Labs in action (2min)

<https://youtu.be/oeLajg0u4FQ>

OuluHealth ecosystem on CNN (5min)

<http://www.cnn.com/video/data/2.0/video/world/2016/02/12/digital-state-finland-new-technologies-pkg.cnn.html>



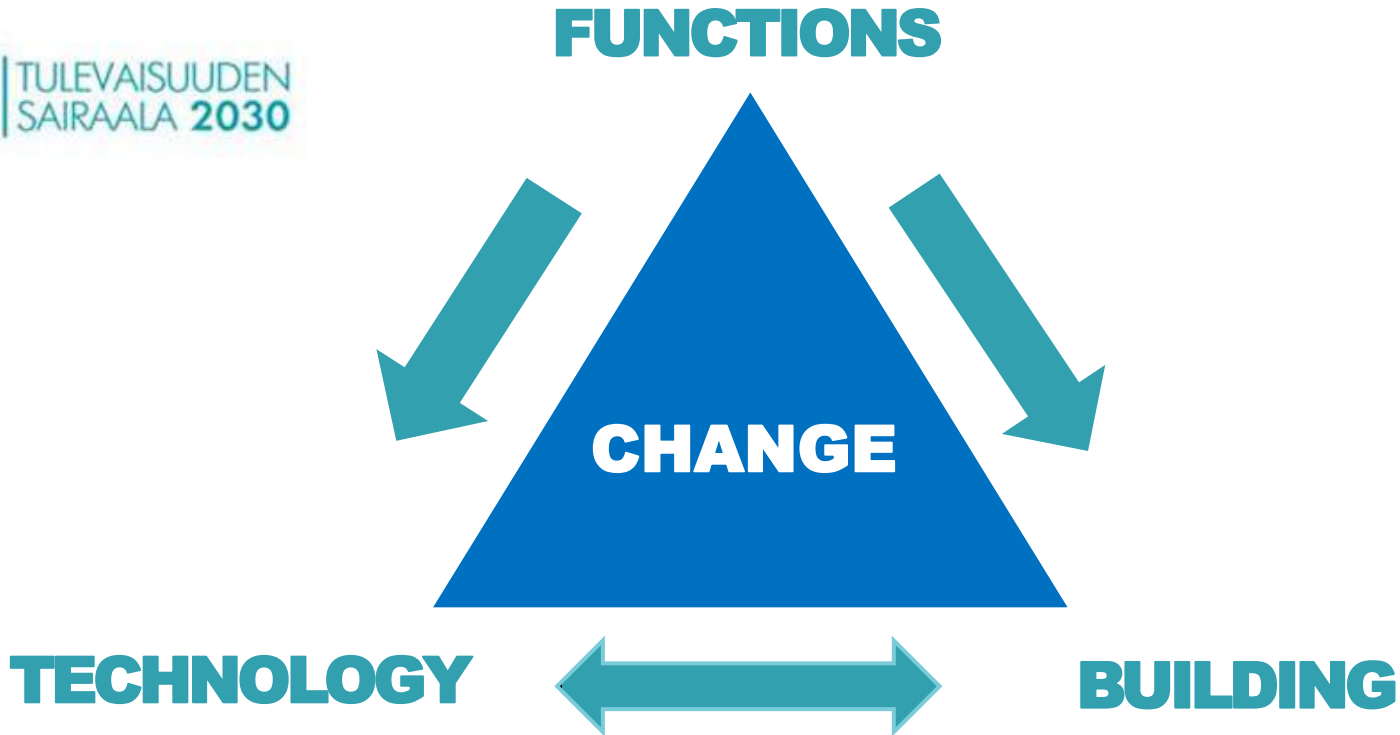
Process Development & Service Design



Future Hospital OYS 2030



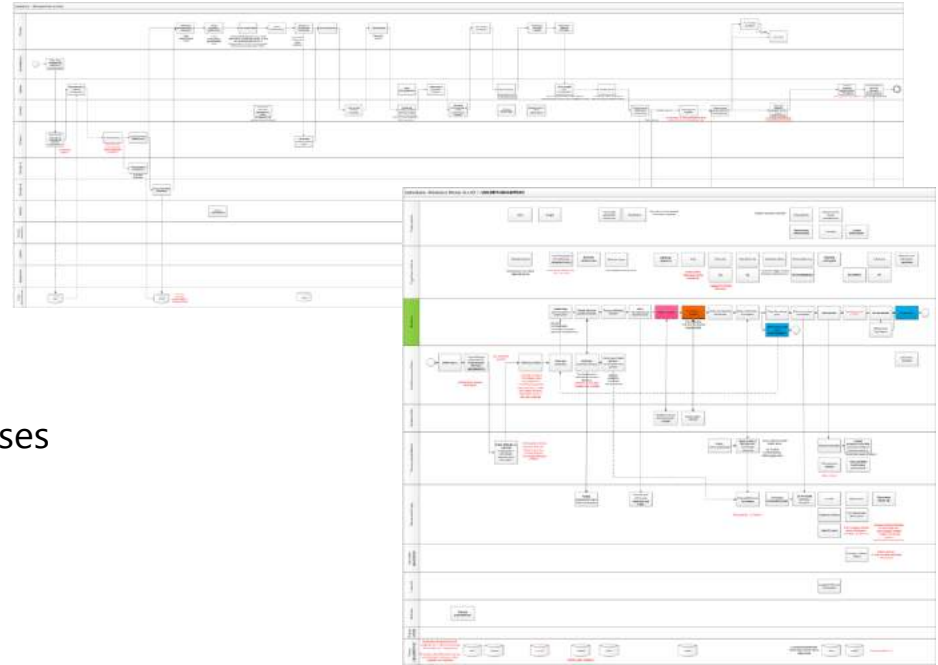
TULEVAISUUDEN
SAIRAALA 2030



Process Development

Process development focus areas:

- Current state analysis – with Delphi
 - Productivity potential recognized
- Customer flow analysis
- Benchmarking
- Visits to departments, other hospitals and businesses
- Customer profile cards, care lines and equipment
- FUNCTION workshops
- PREMISES workshops
- Virtual modeling



Current state description and analysis
2017 with Delphi

Simulated Operations

Service Design with Patient Profiles

Patient Profiles

Created by health care professionals
Imaginary but realistic step-by-step service journey

Device, System and Equipment specification

Devices and other equipment are included in model room sessions

Facilitation

Sessions are facilitated by Service Designers. Sessions are recorded and participants are interviewed after the session to collect the feedback.

Feedback

Designs are either approved or updated according to feedback



Model room workshop
in OYS TestLab, fall 2017

Service Design in numbers



"Cube" building:
40 workshops
125 hours
800+ health care
professionals involved



Ideas, Innovation and Co-Creation





Facilitating Cooperation

Open Channel for Ideas

www.OYS2030.fi/Ideat



Electronic platform for idea
collection and management

Jaa ideasi ja anna palautetta

Kun sinulla on idea tai palaute, oli se sitten pieni tai iso, älä anna sen unohtua, vaan kirjaa se PPSHP:n Tulevaisuuden sairaala 2030 hankkeen ideapankkiin talteen ja jatkokehitettäväksi. Se vie vain hetken aikaasi. Jos haluat palautetta jättämäsi ideaan jätätän yhteystietosi. Omat yhteystiedot kohtaan.

Idean/palautteen nimi (Pakollinen)

Anna ideallesi sitä kuvaava nimi.

Idean/palautteen kuvaus (Pakollinen)

Kuville ideasi sisältö sekä sen hyödyt lyhyesti ja selkeästi niin, että sen ymmärtää kuka tahansa prosessin myöhemmissä vaiheissa.

Omat yhteystiedot

Kirjoita omat yhteystietosi.

Julkaise

Co-Creation – inDemand Project



A Horizon 2020 funded EU-project

a new model where Healthcare organizations and companies co-create Digital Health solutions, with the economic support of public regional funds.

1. Need identification from Hospitals
2. Call for companies
3. Solution co-creation and validation

www.indemandhealth.eu





Thank you!

Follow us



Future hospital @oys2030



Tulevaisuuden sairaala 2030

Examples of completed pilots



OuluHealth Labs covers the whole patient chain from home to hospital through 3 collaborating testbeds

Oulu WelfareLab

(healthcare centers, social care & patients' home)

End-users are at customers' and patients' homes and in all social and health care services within in the City of Oulu. Professional and customer feedback on products in a real, everyday social and health care environment.



contact: Jaana Kokko
City of Oulu
jaana.a.kokko@ouka.fi

OYS TestLab

(hospital environment)

Various hospital units can be built into open spaces: an operating theatre, clinics, wards, control rooms, waiting areas etc. Includes a digital testbed for EHR integrations, a 3D virtual space and a 5G test network.



contact: Timo Alaläkkölä
Oulu University Hospital
timo.alalaakkola@ppshp.fi

Oamk SimLab

(simulation environments)

Covers bioanalytics, nursing and emergency nursing, optometry, oral health care, radiography and radiation therapy as well as rehabilitation learning, and student collaboration.



contact: Helena Heikka
Oulu University of Applied Sciences
helena.heikka@oamk.fi

Oulu HealthLabs offering

Oulu WelfareLab

(healthcare centers, social care & patients' home)



1. FAST TRACK FEEDBACK 450 €

Evaluation session with specialists

2. FEEDBACK PANEL 880 €

Prepared evaluation session with specialists

3. PRODUCT TRIAL

Testing in authentic environment with genuine end users

Level 1 (days, few participants) 1050 €

Level 2 (1 month, few participants) 2200 €

Level 3 (several months, more participants) 4950 €

OYS TestLab

(hospital environment)



1. FAST TRACK FEEDBACK 580 €

One hour evaluation session with specialists

2. FEEDBACK PANEL / PROTO END-USER TRIAL 1080 €

Prototype end-user trial & feedback by spec. panel

3. REAL-LIKE PROTOTYPE TRIAL 2000 €

Prototype trial at simulated scenario by end-users

4. RENT-A-LAB 500 € + 100 € /h

Training session in OYS TestLab

5. LAUNCH-IN-LAB 500 € + 100 € /h

Make your launch a success in OYS TestLab.

6. 30-DAY TRIAL 1000 €

Product trial run by experts for a month or longer

7. INTERFACE IT (starting from 3000 €)

IT interface design with OYS TestLab digital platform

8. LAB TOUR 550 €

Oamk SimLab

(simulation environments)



1. LABTOURS

LabTour 1 (presentation 1 hour) 120 €

LabTour 2 (more indepth) starting from 200 €

LabTour 3 (3 hours) 420 € (ALV0%)

2. PROTOTYPE TESTING

Students testing the product under teacher's supervision, including feedback and report
Price: negotiable

3. PRODUCT TEST USE

Students test the product according to company's usability, including feedback and report
Price: negotiable

4. PREMISE RENTAL FOR TRAINING

Technical support available during session
Price: 450 € for minimum 4 hours, extra hours 100 €/h

Buddy Healthcare: Testing a practicality of a patient informing system

What did you want to test?

We wanted to test how our BuddyCare solution supports families preparing for surgeries and streamlines their entire surgery experience. Furthermore, we tested how the information provided by patients through BuddyCare supports healthcare professionals in their daily activities.

What are the test results?

OuluHealth labs provided a modern and unique environment for us to test and validate the feasibility of our solution. The nurses and doctors were really interested in helping us to continuously develop our product.



tested in 2017 by:
OYS TestLab

Monidor: Usability and user interface testing for infusion therapy monitoring

What was tested?

Monidor needed feedback for the product development. Interesting questions were for example:

- Do you think the product is useful?
- In what kind of situations the product would be at its best?
- What are the most urgent development needs of the product?
- Would the product facilitate your work?
- Would you use the product?

What are the results?

The nurses gave highly positive feedback concerning the user-friendly user interface (UI) and small-sized product. The product development and the company management received valuable information for developing the product's next phase and its readiness for the market.



tested in 2015 by:
Oamk SimLab
& OYS TestLab

CompactaSteril: Testing product usability in a hospital environment

What did you want to test?

The objective was to allow healthcare personnel to test the usability of CompactaSteril in a hospital environment.

What are the test results?

Overall, the feedback we received was positive, and the intended usage of the product was supported. The hospital personnel provided us with useful suggestions for the further customization and improvements to CompactaSteril. We will finalize the development of this prototype and then perform the studies needed to obtain regulatory approval. The results of the usability testing and the feedback we obtained will contribute to the development of the final CompactaSteril's solution.



tested in 2017 by:
OYS TestLab

Ralla: Testing the usefulness of a pilot application

What did you want to test?

We tested the usefulness of a pilot version of the Ralla application. We also developed user-based modelling of RALLA reports.

What are the test results?

Oulu offered readily prepared educational and testing facilities, including easy access to the daycare environment and feedback from end users. We needed feedback on the user-friendliness of the RALLA application. Occupational therapy and social pedagogy students tested the tools in real-life situations. After that, they gave us feedback and more ideas for product development.



tested in 2017 by:
Oulu WelfareLab

Near Real: Testing user-friendliness of a product under real-life conditions

What did you want to test?

We wanted to test the user-friendliness of our product under real-life conditions. The solution was tested in cooperation with the City of Oulu's social and health care services, housing assistance and mental health services by customers, as well as professional users.

What are the test results?

Cooperation with organizations such as Oulu Health Labs helps us reach established goals and further develop services. Global digitalization and transformation in Finland's social and health care system offer Near Real excellent prospects for the future. Near Real's open API- application program interface offers a particularly promising opportunity. In this way, for example, integration with hospital appointment booking and the patient-data system is easy.



tested in 2017 by:
Oulu WelfareLab

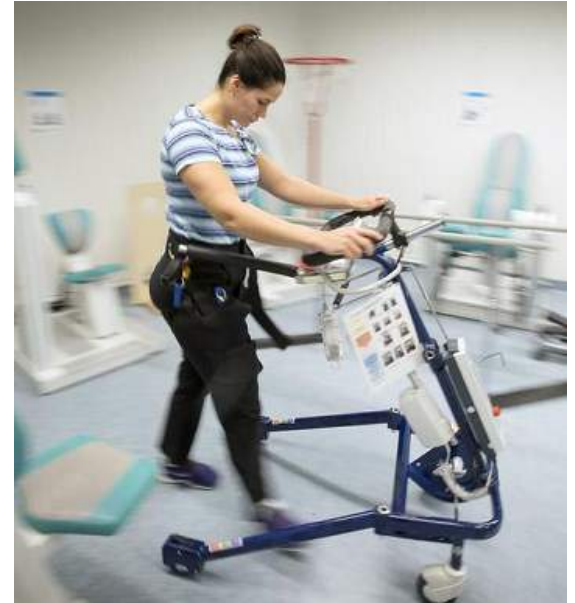
Daiwa House: POPO robot for rehabilitation

What was tested?

POPO is already in use in many hospitals and rehabilitation clinics in Japan, and the company is now seeking experience about its use in a European culture. The company tested the robot in three different user environments at the City of Oulu (one month test in each): At the rehabilitation ward in the city hospital, at open rehabilitation and in an elderly care unit in Haukipudas.

What are the results?

The city of Oulu gained experience on robotics in rehabilitation, and the company learned about Finnish healthcare system and end users. They learned for example that in Finland, rehabilitation in homes is a growing method in the future and mobile devices like POPO will be needed.



tested in 2017 by:
Oulu WelfareLab

Sonera: Piloting new solution for communication among palliative care stakeholders

What did you want to test?

We wanted to test the Sonera Vihko solution's operations in the palliative care process within several different professional groups (nurses, oncologists, anaesthesiologists, social workers, etc.).

What are the test results?

We got proof that our idea for the communication model and the appropriate solutions in a challenging, multi-organizational environment were correct. The deployment of new practices requires determined management of change and active practical implementation.



tested in 2016 by:
Oulu WelfareLab
& OYS TestLab