

# National implementation of telemedicine for COPD patients



Fælles Udvikling af Telemedicin  
Kommuner og Regioner i Danmark

# Organization of the Danish health care system

## NATIONAL LEVEL

Ministry of Health



## REGIONAL LEVEL

Five Regions



## LOCAL LEVEL

98 Municipalities



# National agreement

## Economic agreement 2016: National implementation of telemedicine for COPD patients

- Organized in 5 regional programs
- National health guidelines (National Health Authority))
- National business case
- National tender on Telemedicine (FUT)

## Local (98 municipalities / 5 regions)

- Get on target of the national agreement
- Organizational implementation
- Economy

## 5 regional programs

- One region and belonging municipalities
- Based on existing organizational setup
- Establish the overall framework for the implementation

# Telemedicine for COPD-patients

- Reference from GP or hospital to the telemedicine health service in the municipality
- Target group is patients with severe COPD
- The patients measures weight and oxygen saturation
- Municipal nurse monitor the patient

## **Goal:**

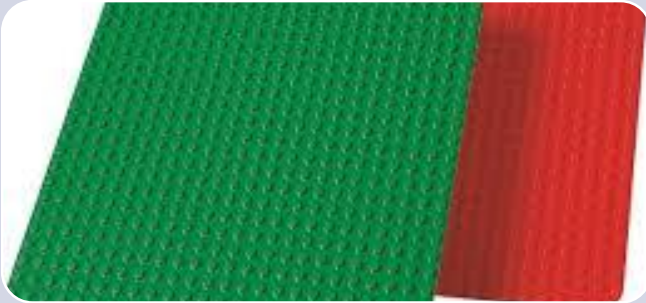
- to improve the patients' empowerment and prevent aggravation and hospitalization
- Part of general movement of health care services closer to the patients home – from hospital to municipality



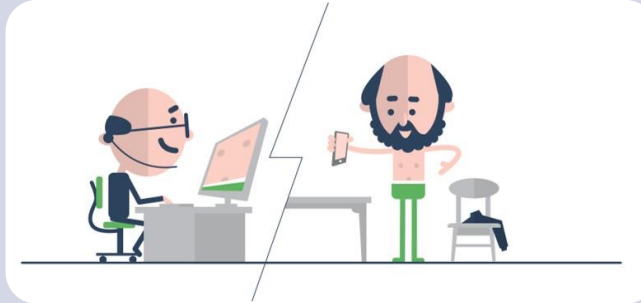
# National tender and development of telemedicine (FUT)

- One organization – on behalf of 98 municipalities and 5 regions
- Small board – extensive mandate
- Two related tenders:
  - Infrastructure for telemedicine
  - IT solutions for patients and health professionals
- Development-project:
  - Development, test and delivery of infrastructure and it-solutions for regions and municipalities

# Suppliers on FUT framework agreements



Infrastructure:  
Systematic



It-solutions for health  
professionals

CGI

Tunstall Health  
KMD

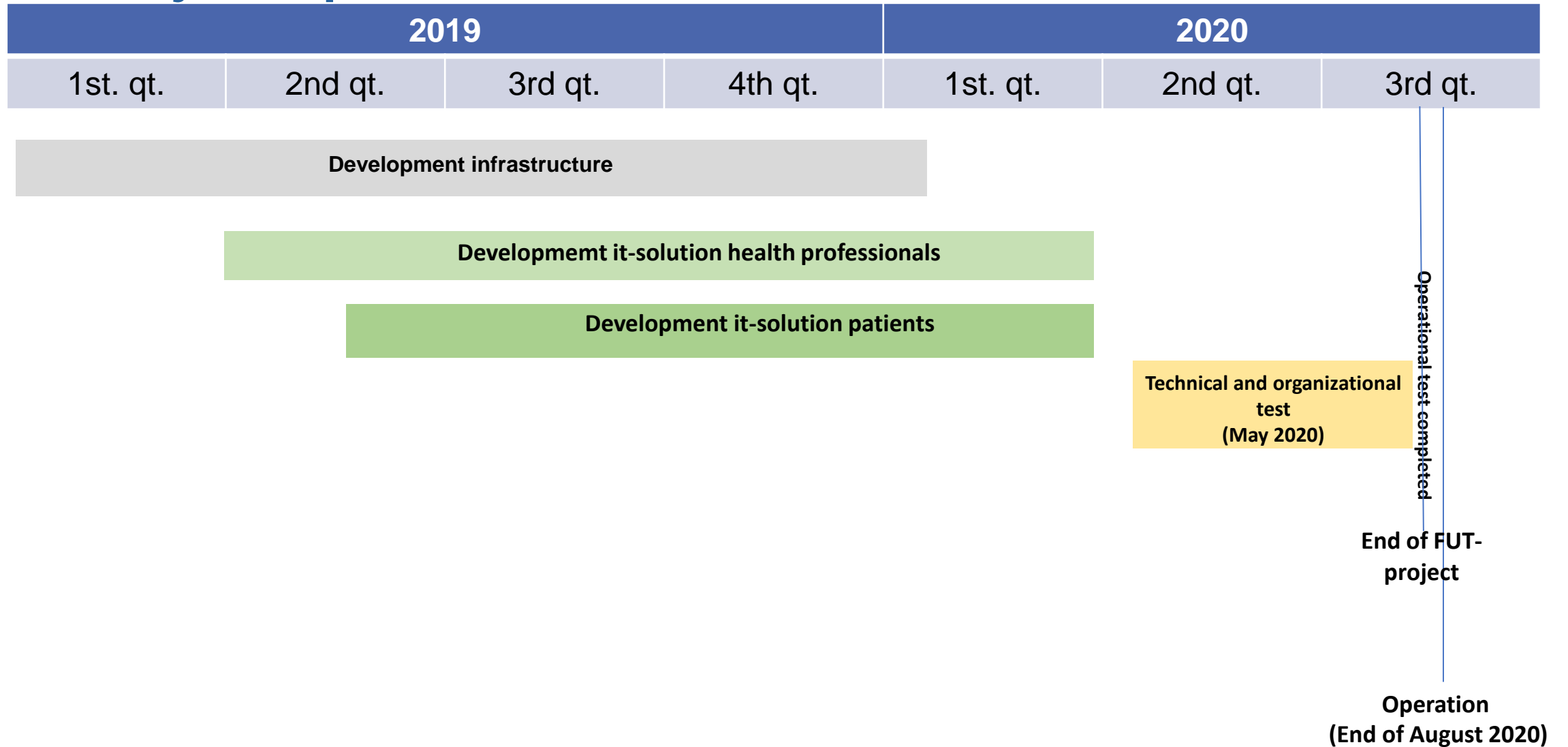


It-solutions for patients

CGI

Tunstall Health  
KMD  
MedWare  
Tunstall A/S

# Project plan



# It-solution for health professionals - Dashboard



**Find borger**

CPR-nummer eller Navn

Indskrivningsdato (fra) Indskrivningsdato (til)

Ryd Søg

Overview of all patients in telemedicine and a status for the individual patient



**Forløb filter**  KOL

**Prioritetsfilter**  Kritisk  Haster  Rutine

**Notifikationsfilter**  Tidsfrist overskredet (0)  Ny Måling (1)  Nyt Spørgeskema (2)  Ny Besked (0)  Video opkald (0)

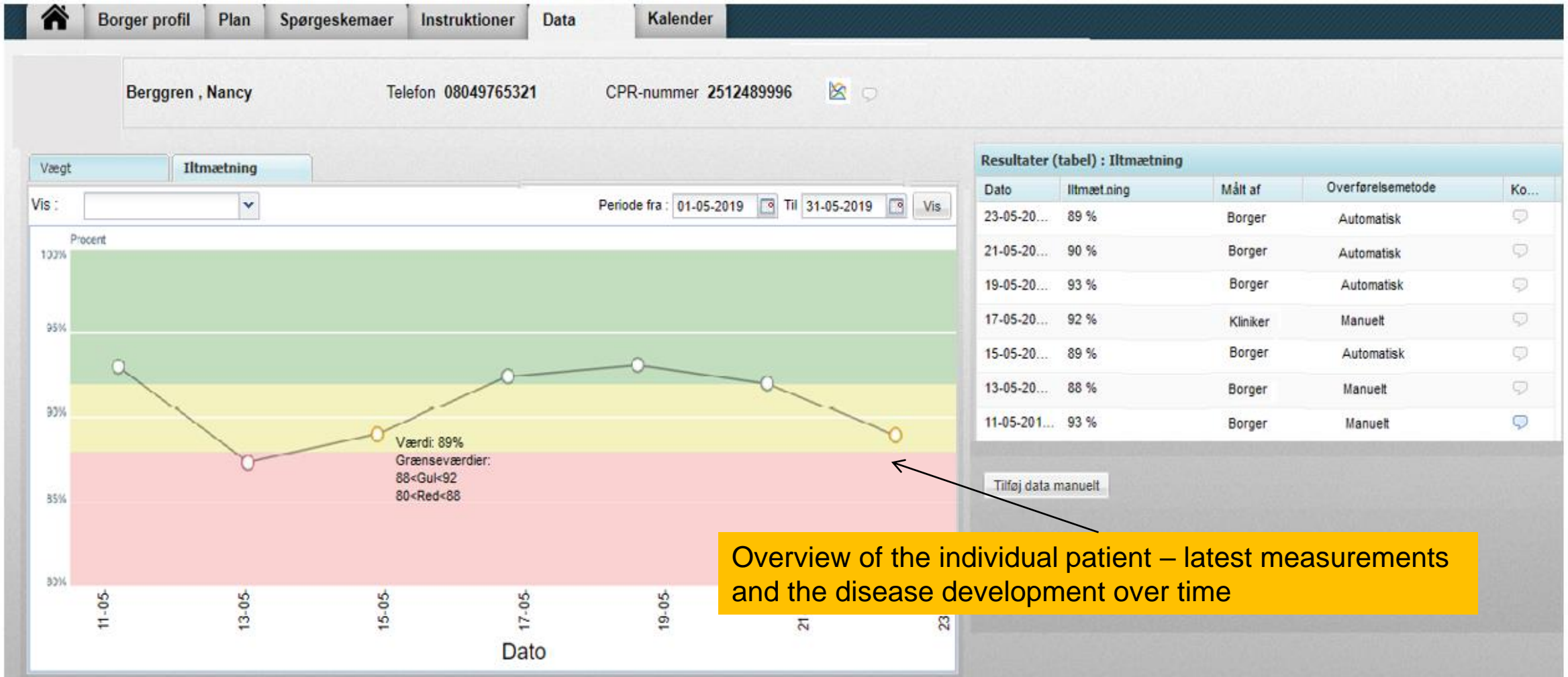
**OBS Filter**  Afdød  Overdragelse af ansvar  Pauseret  Borgere uden plan

Nulstil Anvend

OBS	Notifikation	Prioritet	CPR-nummer	Fornavn	Efternavn	Alder	Adresse	Postnummer	By
			2512489996	Nancy, Ann	Berggren	71	Bjergagervej 110	4736	Karrebæksminde
			0201609995	Einer, Test	Lauridsen	59	Bjergagervej 110	4736	Karrebæksminde



# It-solution for health professionals – Measurements



Overview of the individual patient – latest measurements and the disease development over time

# It-solution for patients – Overview

4:28 PM Wed Nov 6

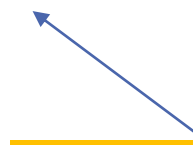
Nancy, Ann Berggren

## Dagens Opgaver

Dagens Opgaver ✓	Pulsmåling kl. 08:00 - 14:00
Beskeder 1	
Kalender	KOL Spørgeskema kl. 08:00 - 14:00
Spørgeskema	
Instruktioner	Rejse-sætte-sig kl. 15:00 - 18:00
Mine målinger	
Foretag måling	
Netværk	
Videoopkald	
Min profil	

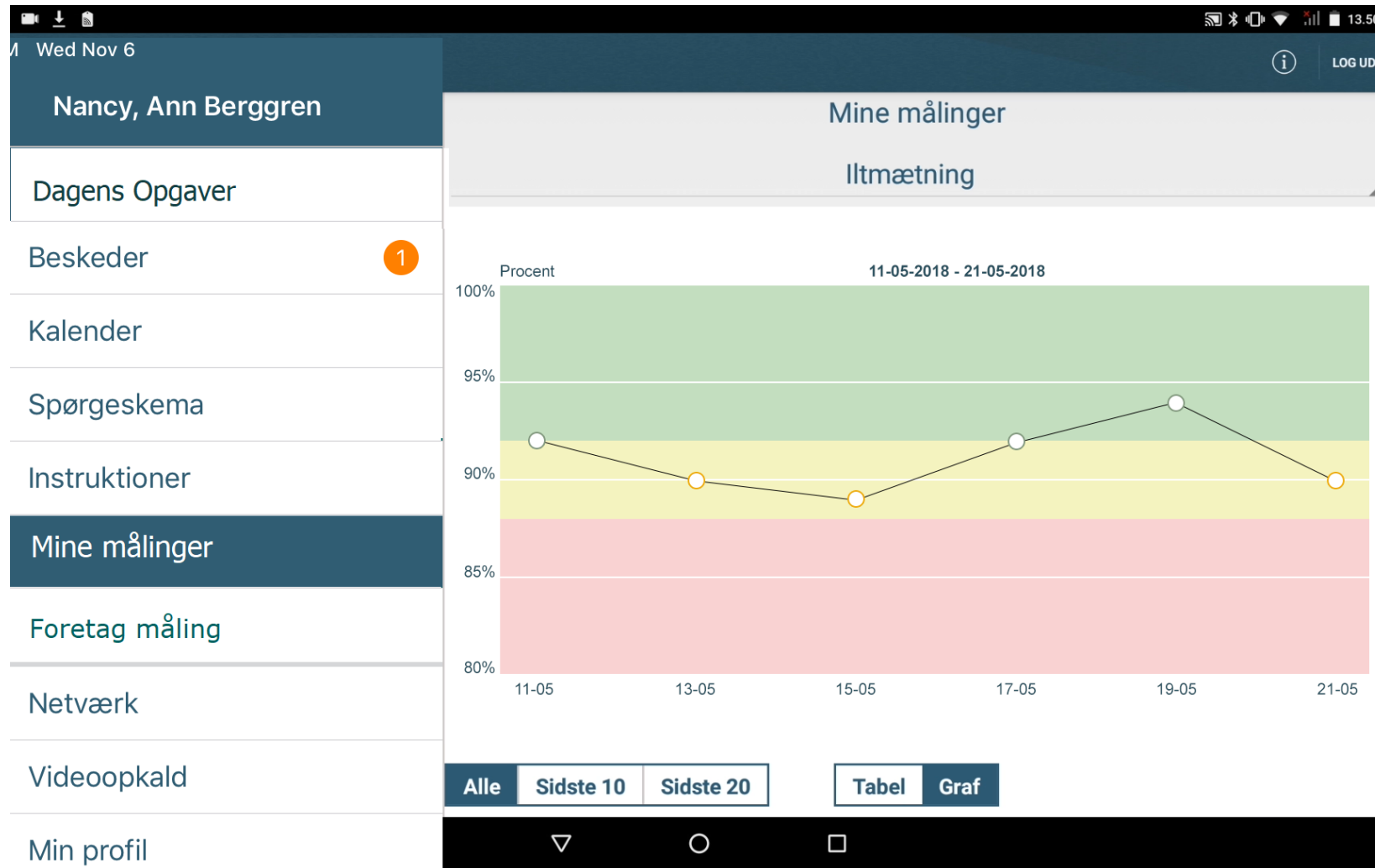


Overview of today's tasks by login



Tasks are marked when completed

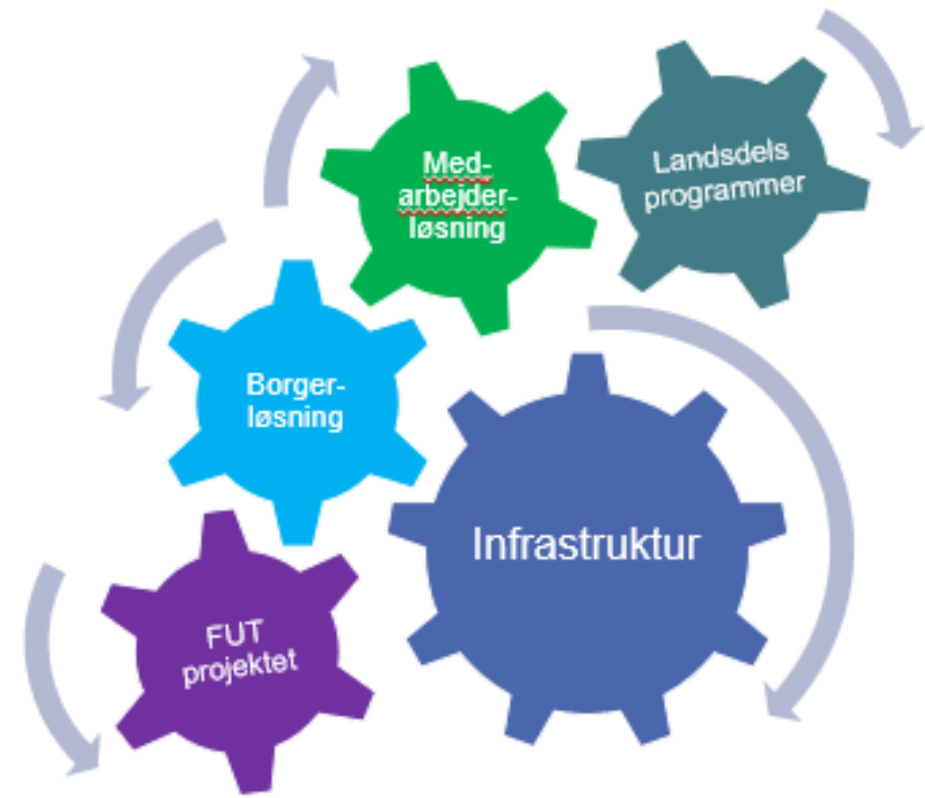
# It-solution for patients – Mine målinger



The patient can see own measurements and follow the disease development over time

# Lessons learned

- Cooperation across 98 municipalities and 5 regions is ambitious - but not impossible
- Dependencies are numerous!
- Communication and stakeholder management is essential
- New model for economy





# Coordination of implementation in 29 municipalities – how?

- Implementation of a new health care service for patients with COPD
- 29 municipalities and 7 pulmonary outpatient clinics – jointly vs. local decision making
- Organizational readiness and change management
- Great variation in geography, volume and management focus

# Implementation organization

## Program for telemedicine in the capital region

Strategy

Concepts and framework

Support local preparation and implementation



## 5 intersectoral cooperations (Planområder)

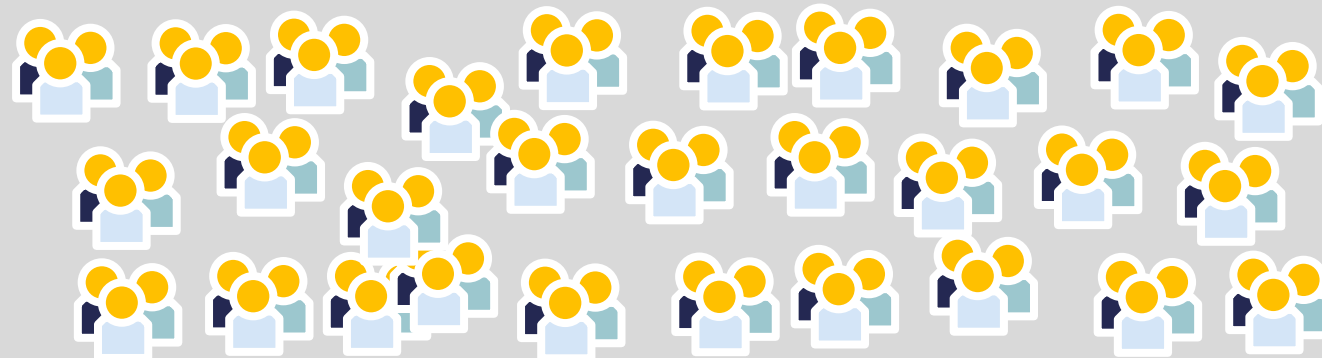
Support the intersectoral cooperation – hospital, municipalities and GP

Follow up on local implementation



## Local implementation (29 municipalities /5 outpatient clinics)

Organizational preparation and implementation



# Implementation packages



- A tool to support local preparations
- Content is coordinated with the overall program planning and schedule
- Sent to municipalities and outpatient clinics app. every 2-3 month

## **The packages contain information, concrete tasks etc.:**

- Tool for local budgets
- Recommendations for the telemedical hardware (tablet, oxygen-measurement)
- Recommendations for local project and operation organization
- Checklist for local it-security assessment and configuration of local it-environment





# Risks

- The municipalities does not receive any references from hospitals and general practice ( = no patients receive the telemedicine service)
- Opposition from health care professionals...is telemedicine a good idea at all?
- If the it-development project is delayed, it has a direct consequence for the organizational implementation

