

The delegation of the "e-Government for Chief Executive Officer Program: e-GCEO" visit to the Norwegian Directorate of eHealth

21 May 2019

## Agenda for the Royal Thai Embassy visit to the Norwegian Directorate of eHealth

**Time:** Tuesday 21 may 2019 – 14:00 – 16:00

Place: The Norwegian Directorate of eHealth (Verkstedveien 1, 0277 Oslo)

Agenda	Presenter	Time
Welcome and introduction to the Norwegian healthcare system	Head of department, Department of Product and plan Hilde Lyngstad	14:00 – 14:25
Helsenorge.no the national patient portal and entry to personal healthcare services	Senior advisor Nina Linn Ulstein	14:25 – 15:05
Data integration and privacy	Senior advisor Anders Långberg	15:05 – 15:35
Introduction on e-health organisation and solutions and ambitions in Thailand		15:35 – 16:05

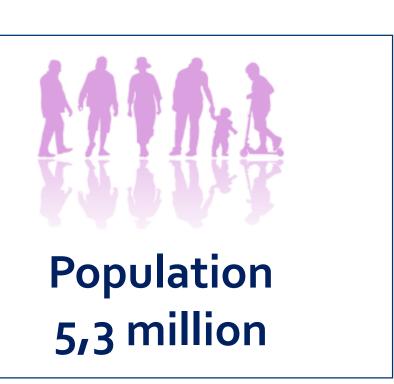


## Introduction to the Norwegian Directorate of eHealth

Head of department, Department of Product and plan Hilde Lyngstad

## Health and care services for all









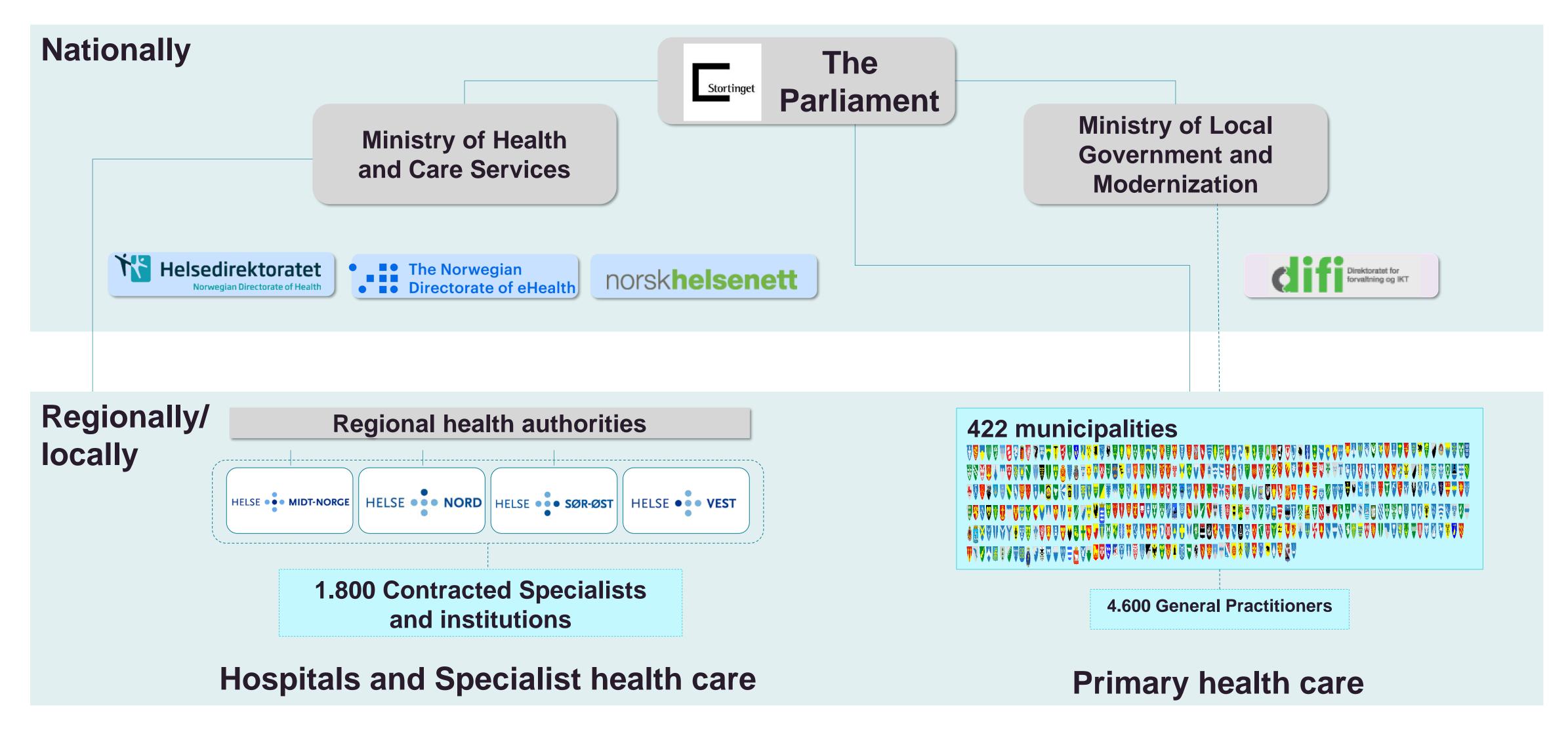




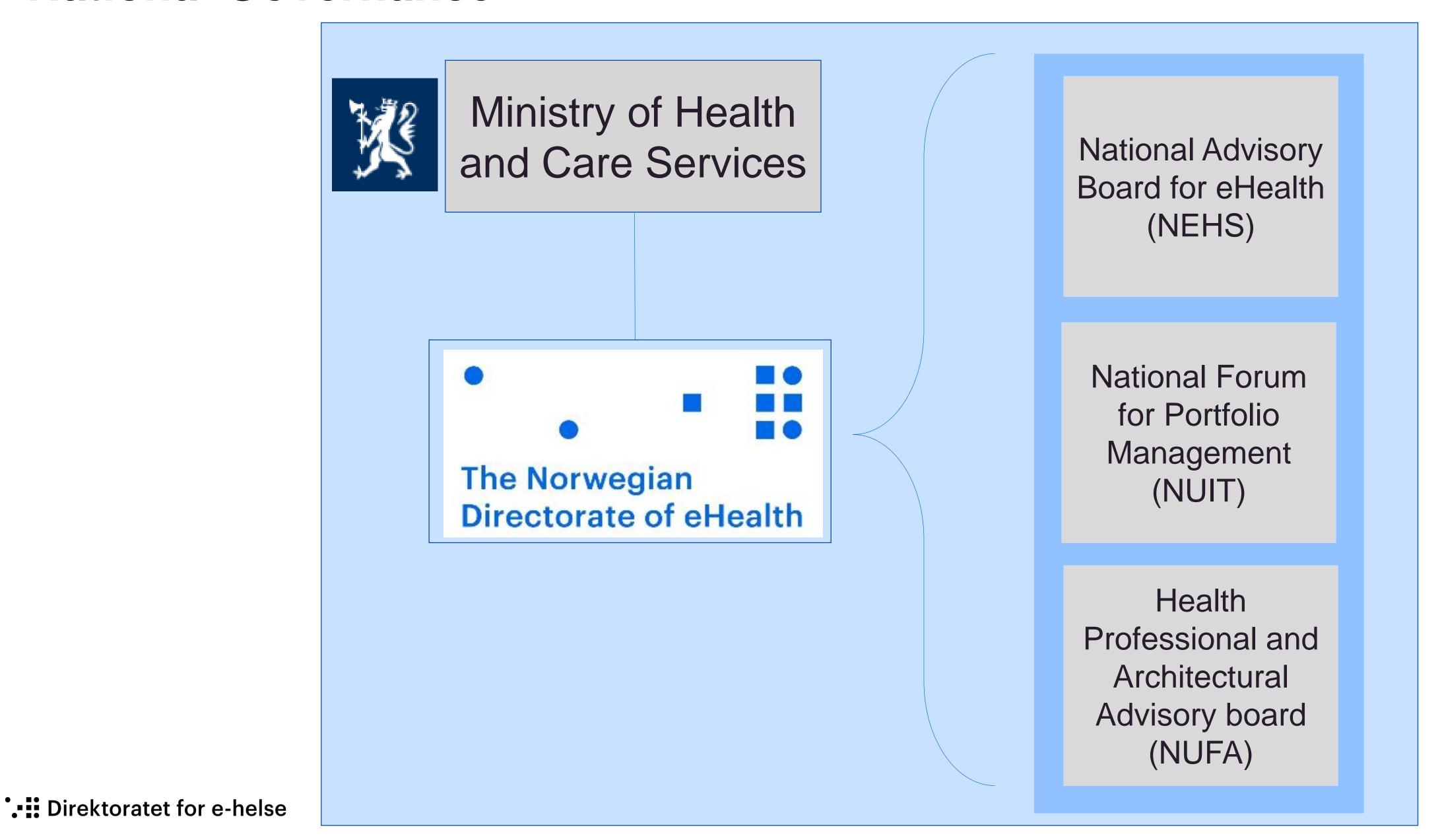




# Current situation: Challenge to achieve connected health across the Norwegian health and care services

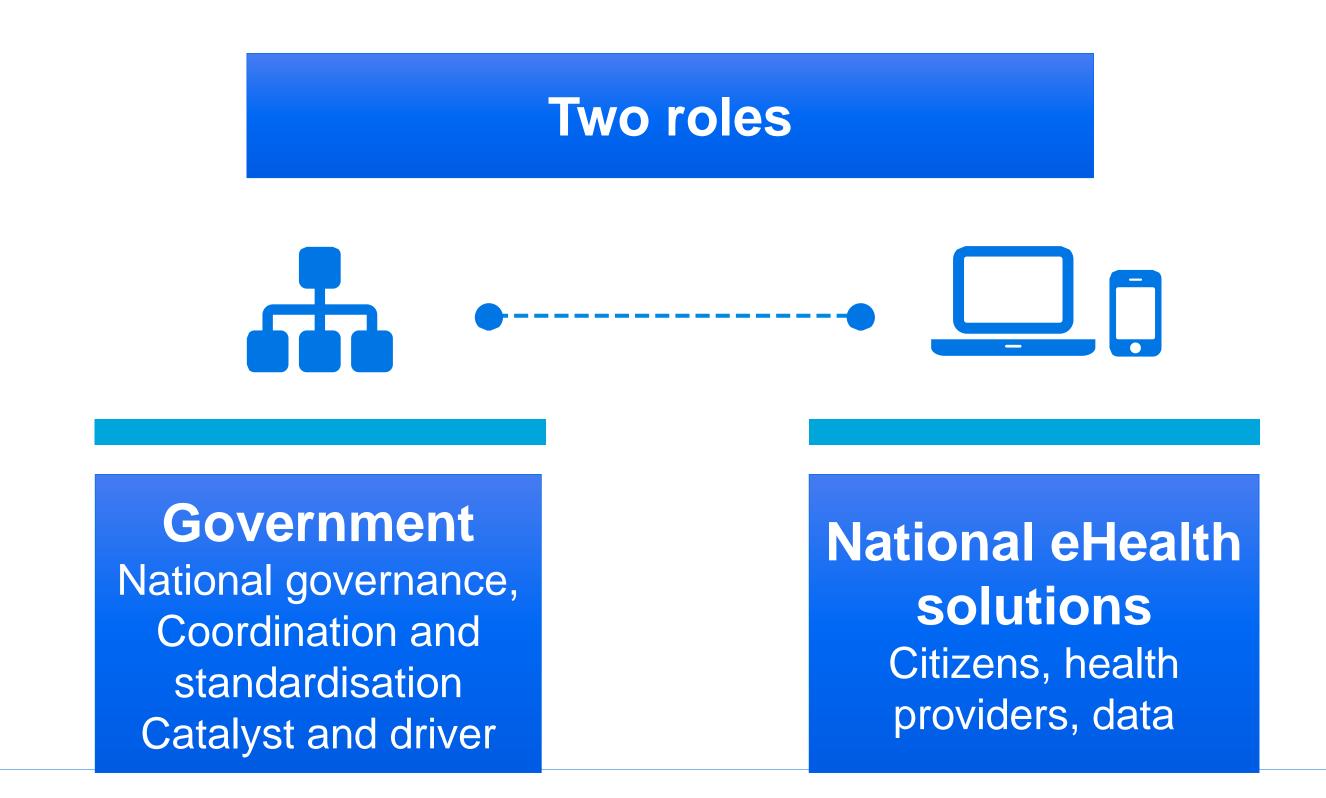


## **National Governance**

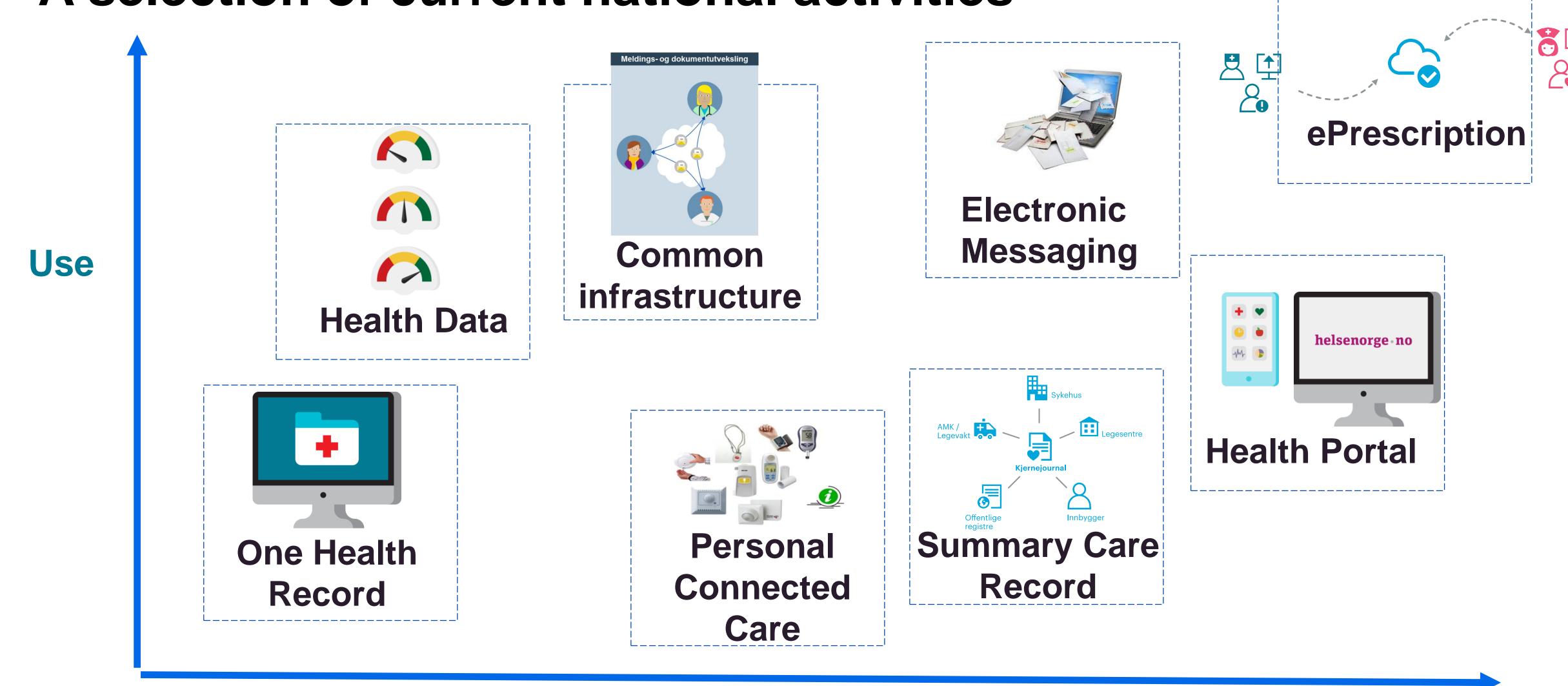


## The Norwegian Directorate of eHealth

The Norwegian Directorate of eHealth New government agency established January 1st 2016

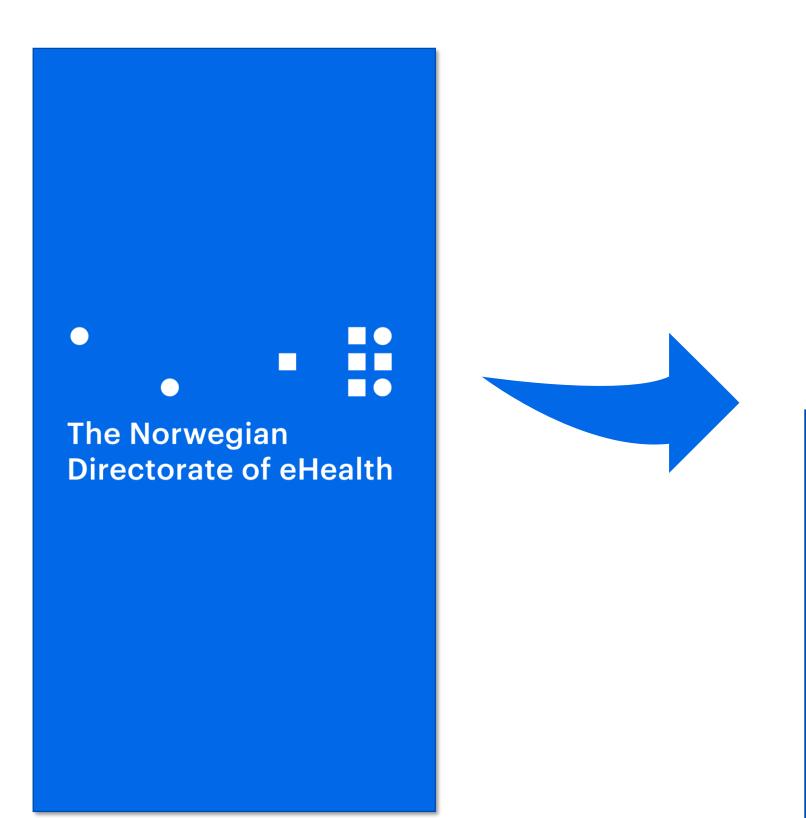


## A selection of current national activities



Level of maturity

## A transition into two strong entities (2020)







Tasks and responsibilities for the directorate

National service provider



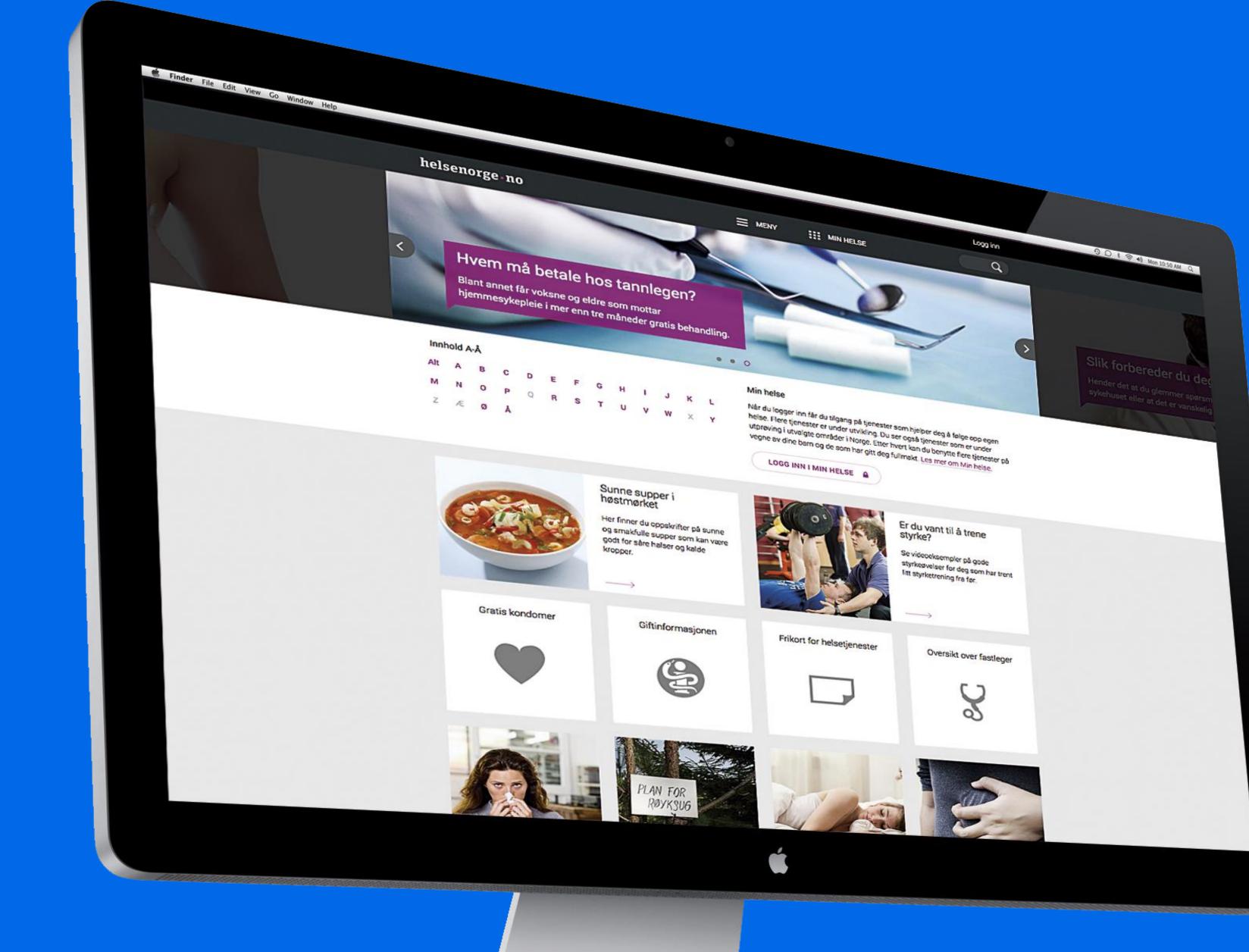
# Helsenorge.no the national patient portal and entry to personal healthcare services

Senior Adviser Nina Linn Ulstein



# Helsenorge.no - The national health portal

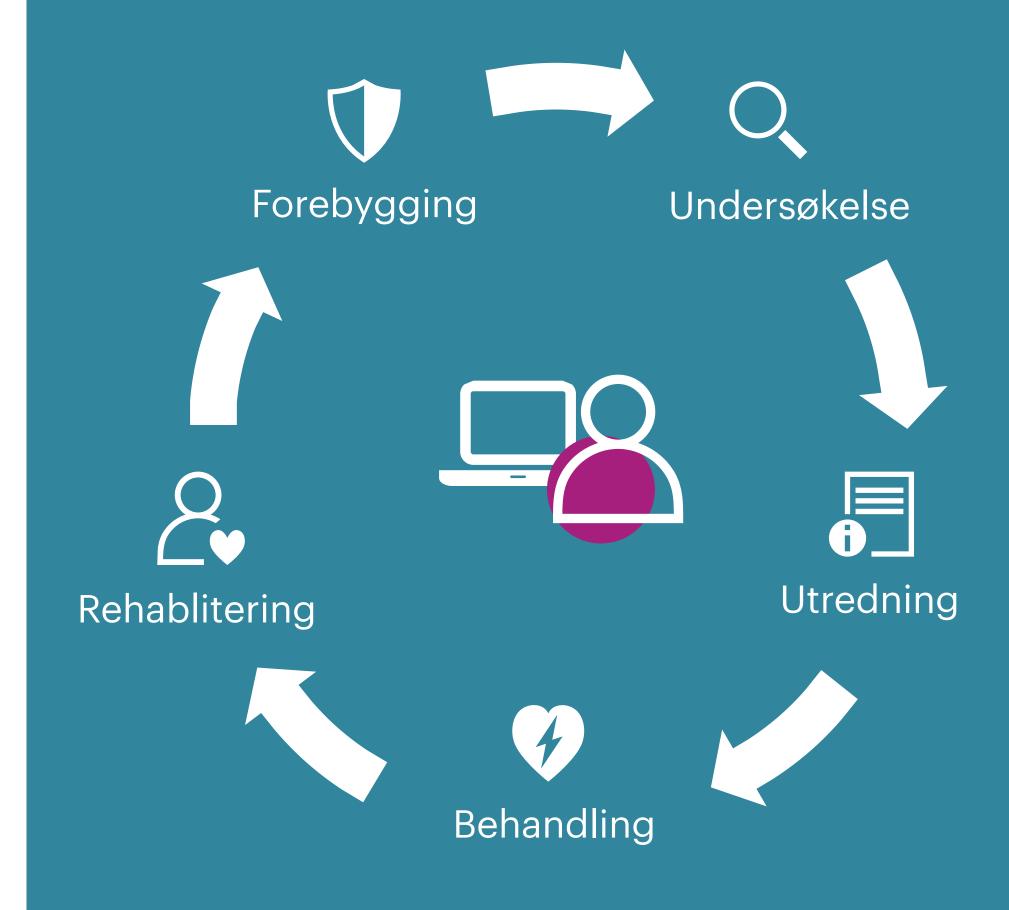
Product manager Nina Linn Ulstein



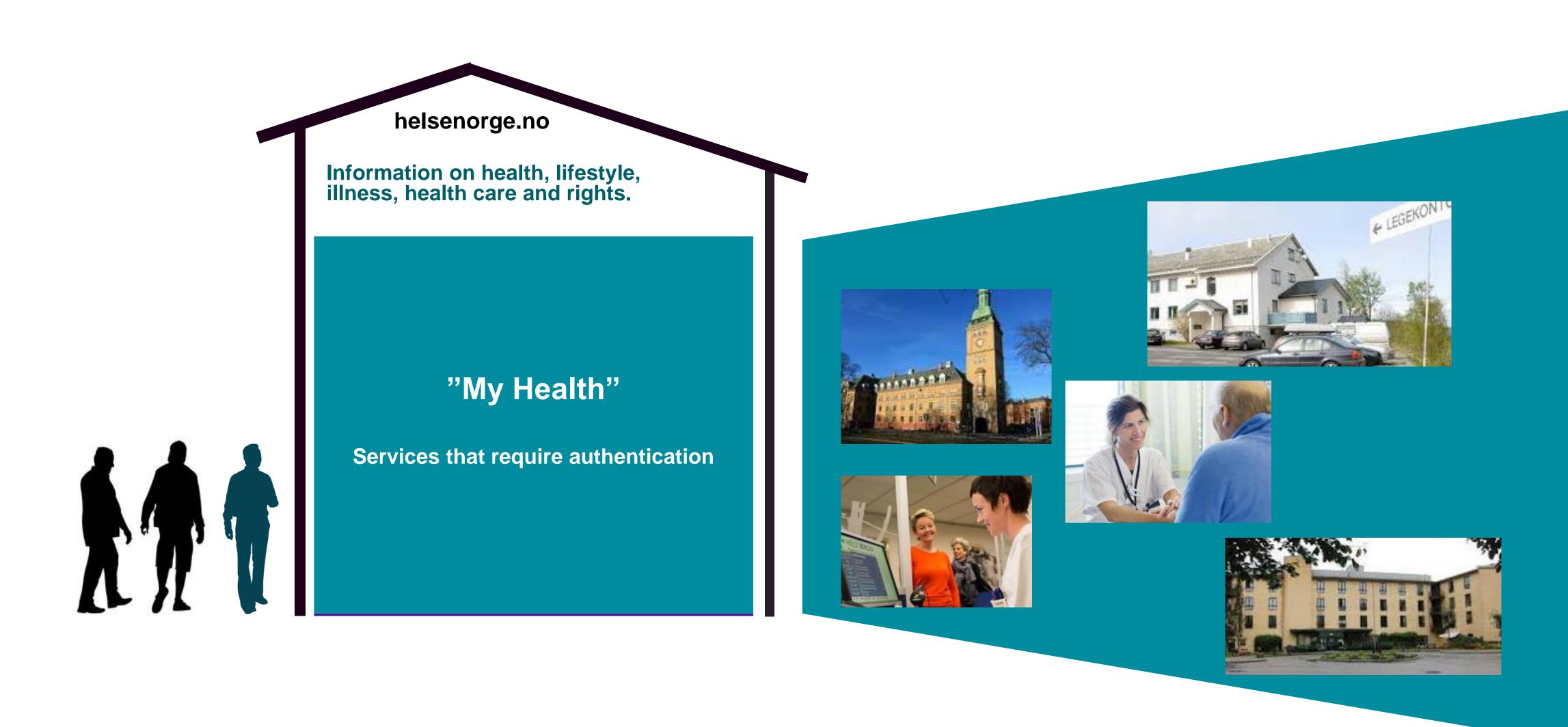
# User sentered digital health services —for effective and efficient healthcare

- Quality-assured information about health, illness, treatment, rights and general guidance for navigating the Norwegian health system
- Self-service for appointment bookings, prescription management, deductibles, access to patient journals, GP services, vaccination history and choice of treatments

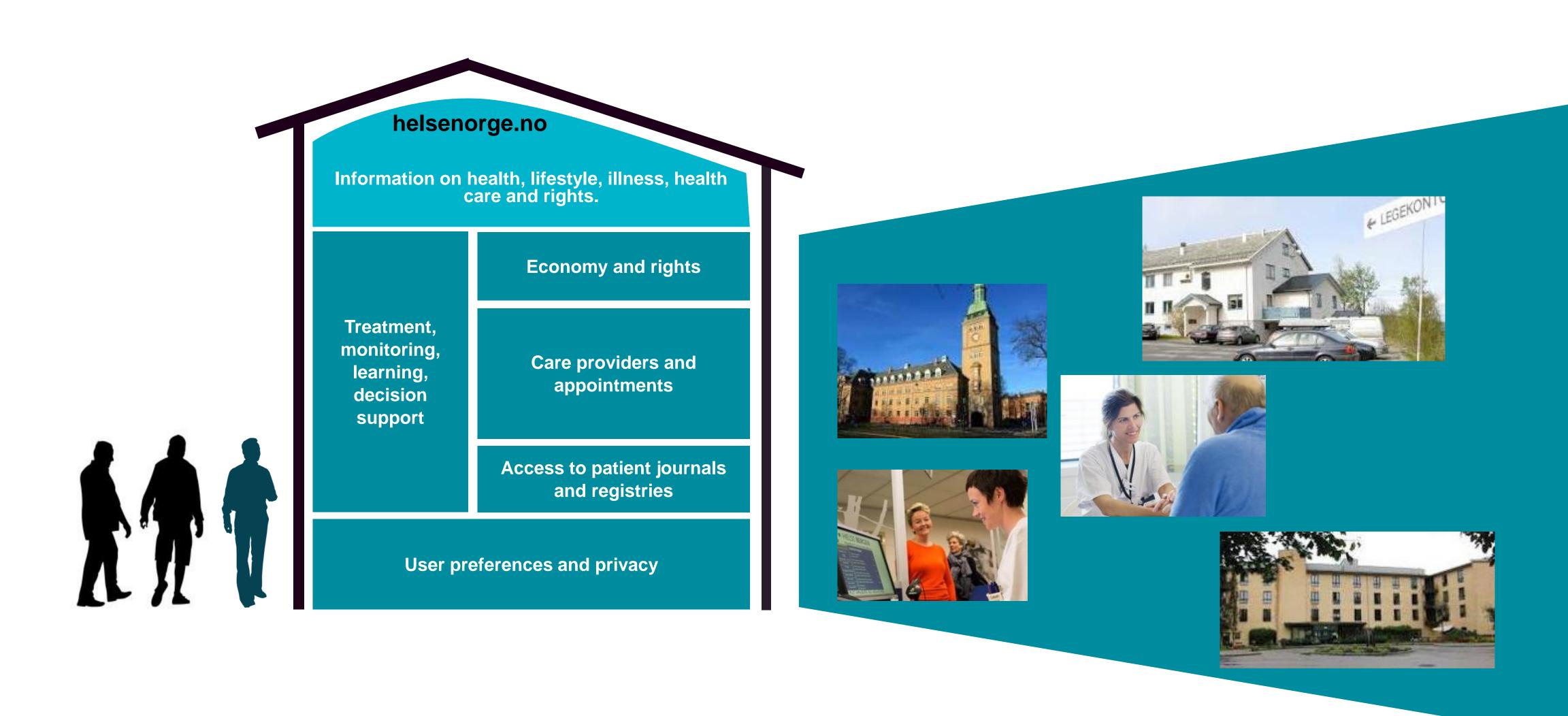




## One online doorway to holistic health services



## One online doorway to holistic health services



Logg inn helsenorge no Q ■ MENY III MIN HELSE



#### Innhold A-Å

Alt A B C D E F G H I J K L M N O P Q R S T U V W X Y ZÆØÅ

#### Min helse

Når du logger inn får du tilgang på tjenester som hjelper deg å følge opp egen helse. Flere tjenester er under utvikling. Du ser også tjenester som er under utprøving i utvalgte områder i Norge. Etter hvert kan du benytte flere tjenester på vegne av dine barn og de som har gitt deg fullmakt. Les mer om Min helse.

LOGG INN I MIN HELSE



Finn behandlingssted med kortere kø

Du kan be om å få time ved et annet sykehus. Sjekk ventetidene her.



Kjernejournal kan redde livet ditt

Snakk med legen din om kjernejournal, særlig hvis du er blant dem som trenger å få registrert kritisk informasjon.

Gratis kondomer



Giftinformasjonen



Frikort for helsetjenester



Oversikt over fastleger





Hvis norske sykehus ikke kan hjelpe

Du kan ha rett til å få behandling i utlandet dersom det mangler et tilstrekkelig og forsvarlig behandlingstilbud i Norge.



Livet etter et hjerneslag

Livet etter et hjerneslag kan skape mange utfordringer for den rammede og pårørende.

Hvor barnesikkert bør hjemmet være?

Alle foreldre er redde for at det skal skje en ulykke med barna. Det gjelder å finne en god balanse mellom lek og utfoldelse – og sikre omgivelser.



Alt om autisme

Autisme rammer spesielt utviklingen av sosial funksjon, språk og kommunikasjon. Autisme er vanligvis til stede fra fødselen av.

Om helsenorge.no

- > Innhold A Å
- Informasjonskapsler

Hjelp og brukerstøtte

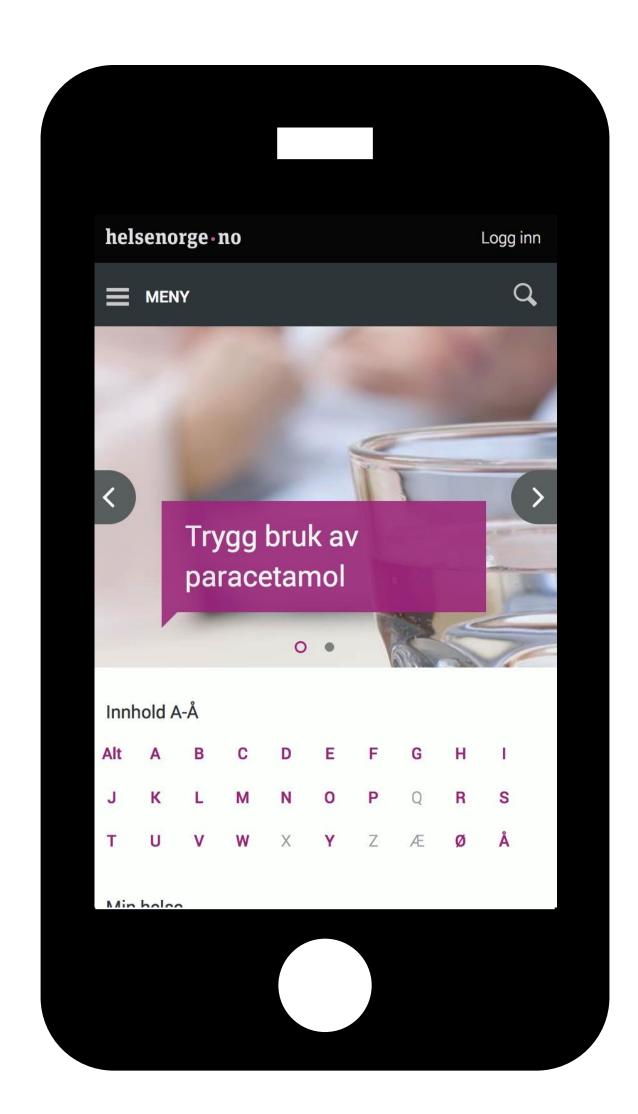
- 800 HELSE (800 43 573)
- Kontakt oss

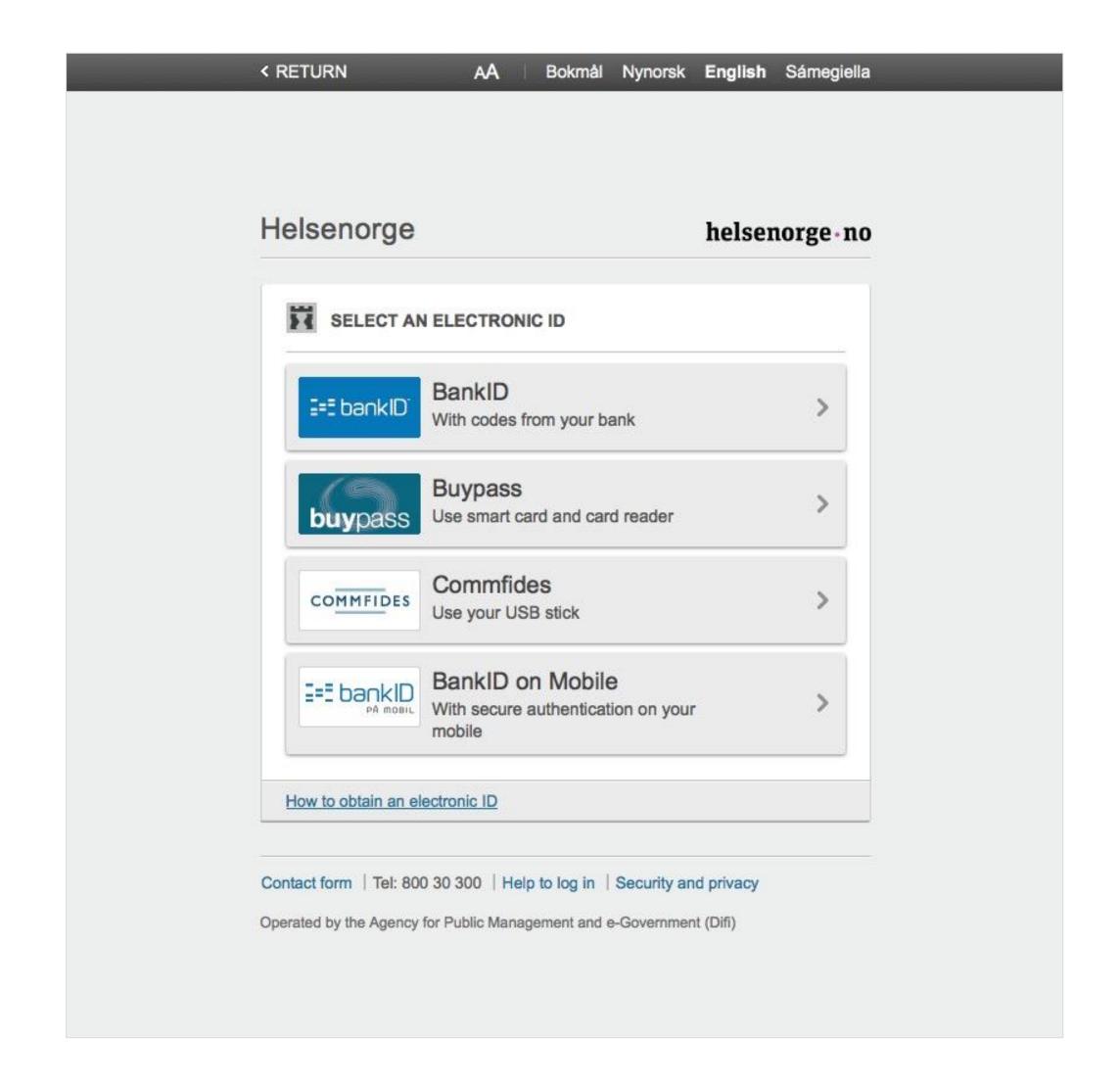
Les bloggen til helsenorge.no

Vil du hjelpe oss med å forbedre helsenorge.no? ↗

Bruksstatistikk januar 2016 🗷

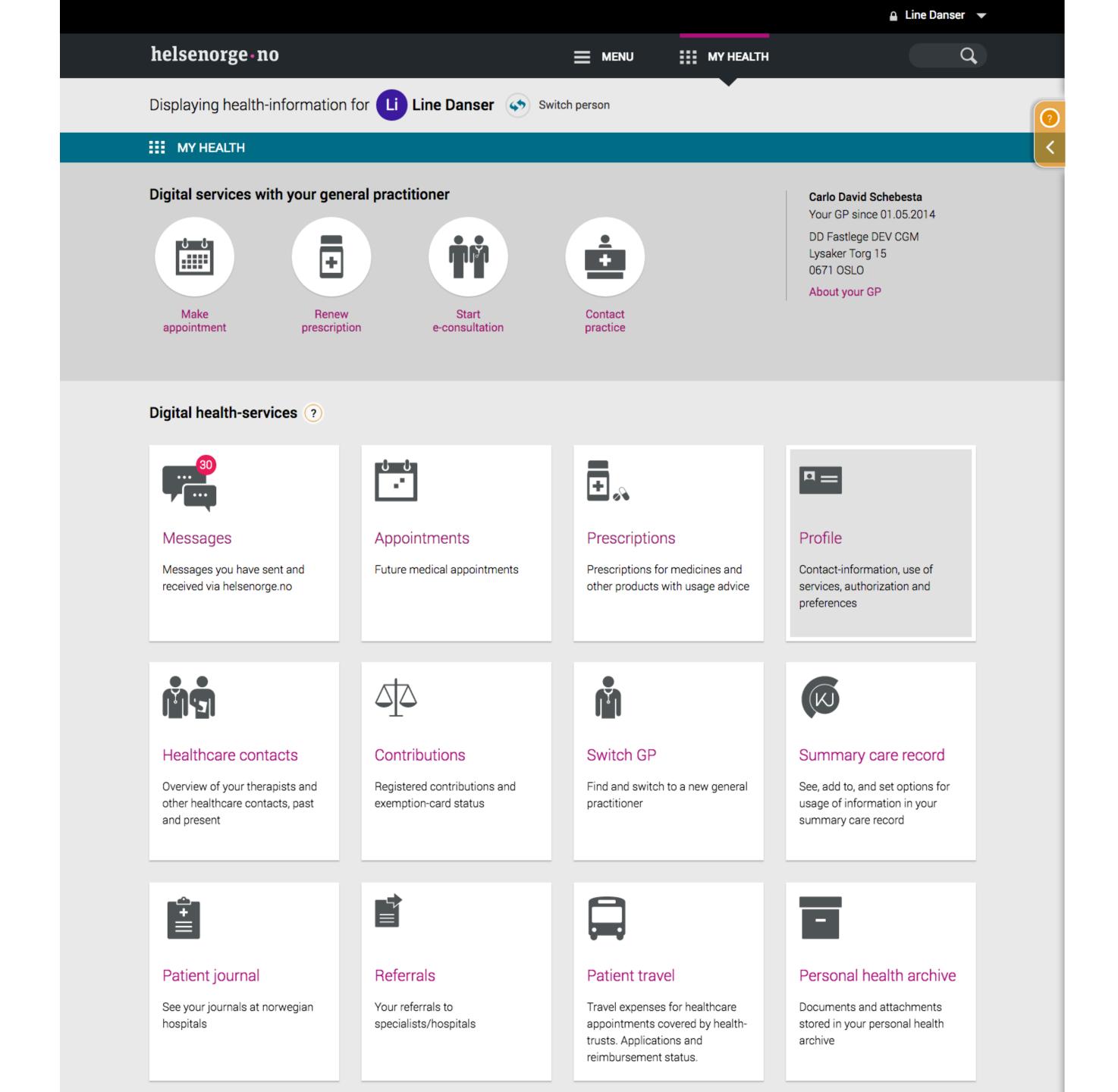
St. Olavs Hospital HF og Helse Midt RHF har lansert nye





## "My Health" main page

Portal to a variety of services available both nationally and to regional pilot areas.



# **General Practitioner Services**

Book appointments and contact receptionist at the doctor's office.

"e-consultation" and renewal of prescriptions.

Increased availability
Dialogue from home
concerning known
conditions; expertise and
mastery of one's own
health situation.

#### Digital services with your general practitioner



Make appointment



Renew prescription



Start e-consultation



Contact practice

#### Carlo David Schebesta

Your GP since 01.05.2014

DD Fastlege DEV CGM Lysaker Torg 15 0671 OSLO

About your GP

#### Digital health-services ?



#### Messages

Messages you have sent and received via helsenorge.no



#### Appointments

Future medical appointments



#### Prescriptions

Prescriptions for medicines and other products with usage advice



#### Profile

Contact-information, use of services, authorization and preferences



#### Healthcare contacts

Overview of your therapists and other healthcare contacts, past and present



#### Contributions

Registered contributions and exemption-card status



#### Switch GP

Find and switch to a new general practitioner



#### Summary care record

See, add to, and set options for usage of information in your summary care record



#### Patient journal

See your journals at norwegian hospitals



#### Referrals

Your referrals to specialists/hospitals



#### Patient travel

Travel expenses for healthcare appointments covered by health-trusts. Applications and reimbursement status.



#### Personal health archive

Documents and attachments stored in your personal health archive

## **General Practitioner** Services

#### **Book appointment:**

Request an appointment from your GP.

Book directly from your GP's calendar or suggest a suitable time.

#### Digital services with your general practitioner



Make appointment

#### Digital health-services ?



Messages

Messages you have sent and received via helsenorge.no



Future



Healthcare contacts

Overview of your therapists and other healthcare contacts, past and present



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Patient journal

See your journals at norwegian hospitals



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Your specia

#### Make an appointment

Be om å få en timeavtale hos fastlegen din. Merk at eventuell kommentar kan leses av andre ved legekontoret enn fastlegen. Du vil bli kontaktet senest innen 5 arbeidsdager. Trenger du hjelp utenom arbeidstid, kontakt nærmeste legevakt. Ring 113 for øyeblikkelig hjelp.

#### Informasjon fra legekontoret

Gunnar Bjødledalen Skinnhueneset Fastlegen er vikar for Thomas Busch frem til 1. februar 2016

Fastlegekontor Bjørnemyr legesenter

#### Merk timeavtalen \*

F.eks. influensavaksine

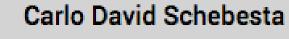
#### Når vil du ha time? \*

Velg tidspunkt fra kalender			Foreslå tidspunkt selv			
Bestill time hos						
Turnus Kandidatesen (turnuslege)						
< Desember 2015 >						
< UKE 50 >						
21	22	23	24	25		
Mandag	Tirsdag	Onsdag	Torsdag	Fredag		
	^	^	^			
	08:00-08:15	10:30-10:40	09:30-09:40	Ingen ledige		
	11:00-11:15	11:00-11:10	09:50-10:00	timer		
	14:30-14:45	14:00-14:10	11:10-11:20			
	15:00-15:15	15:20-15:40	12:00-12:10			
~						

Kommentar V



Avbryt



X

Your GP since 01.05.2014

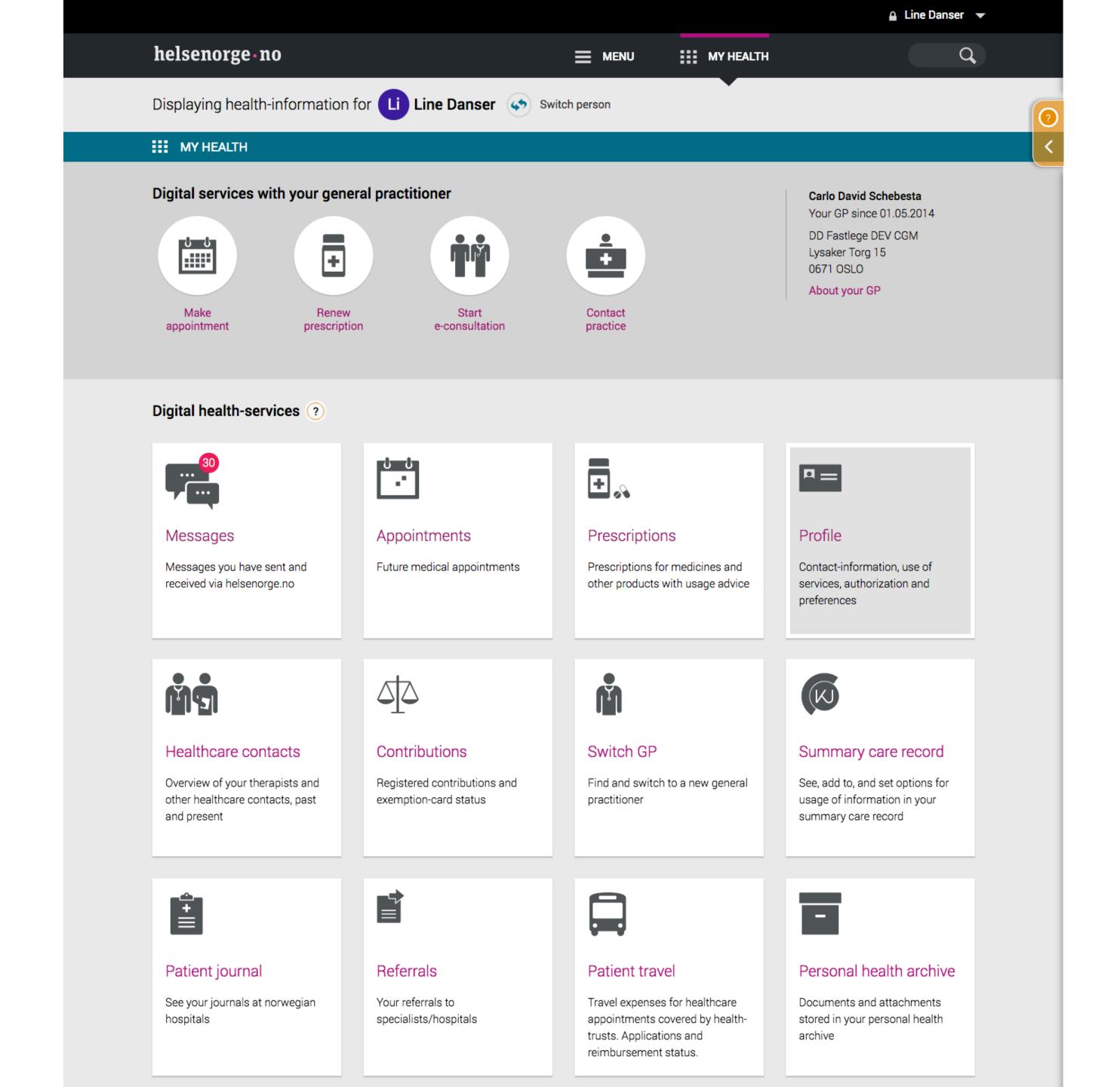
DD Fastlege DEV CGM Lysaker Torg 15 0671 OSLO

About your GP

## "My Health" main page

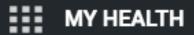
#### May 2016:

Portal to a variety of services available both nationally and to regional pilot areas.



#### helsenorge · no







Displaying health-information for Line Danser





#### **MY HEALTH**

#### Digital services with your general practitioner



Make appointment



Renew prescription



Start e-consultation



Contact practice

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Prescriptions for medicines and other products with usage advice



#### Profile

Contact-information, use of services, authorization and preferences









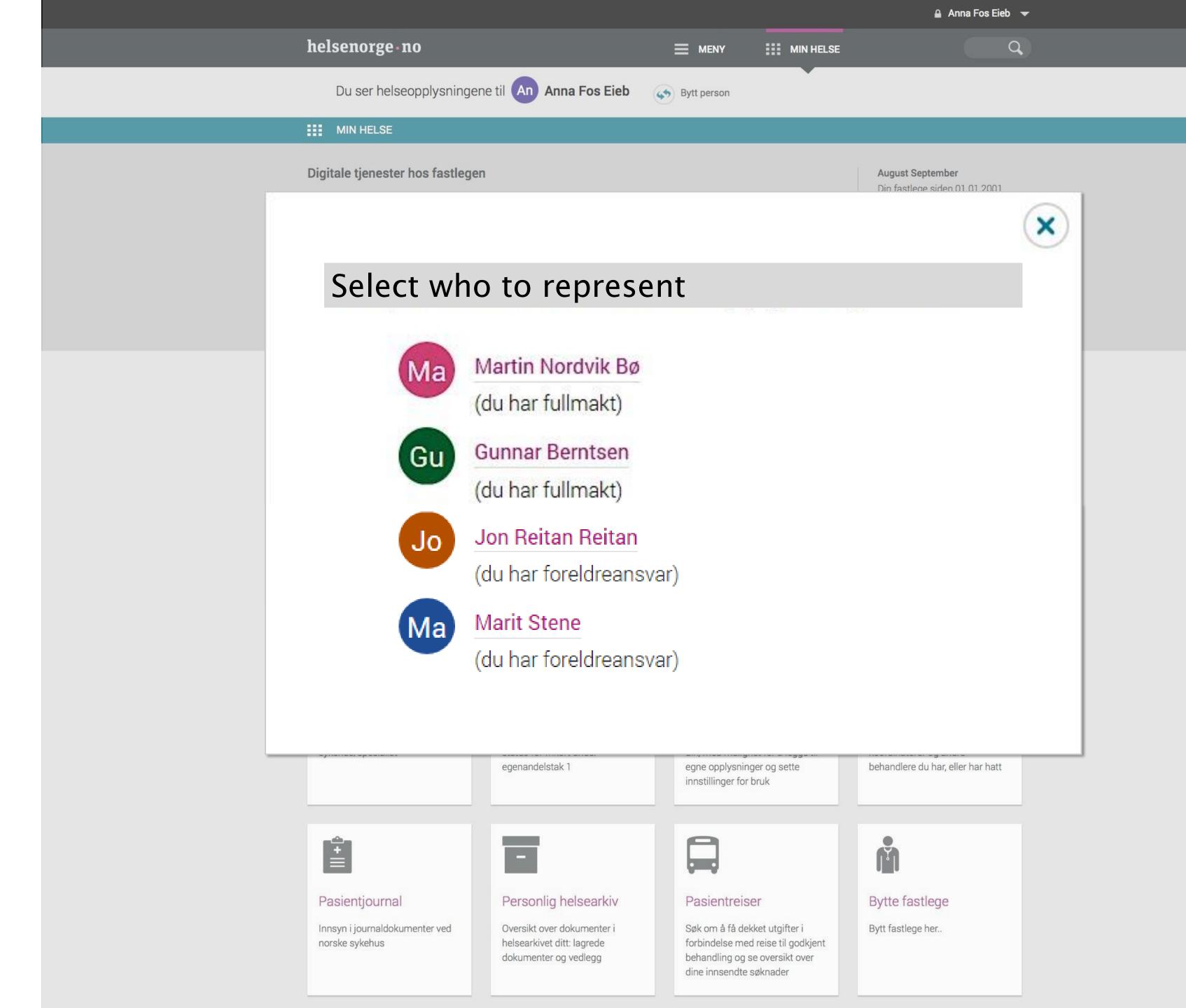
Access for caregivers (relatives): parental rights, authorizations

Privacy: consent, reservation

**Contact information** 

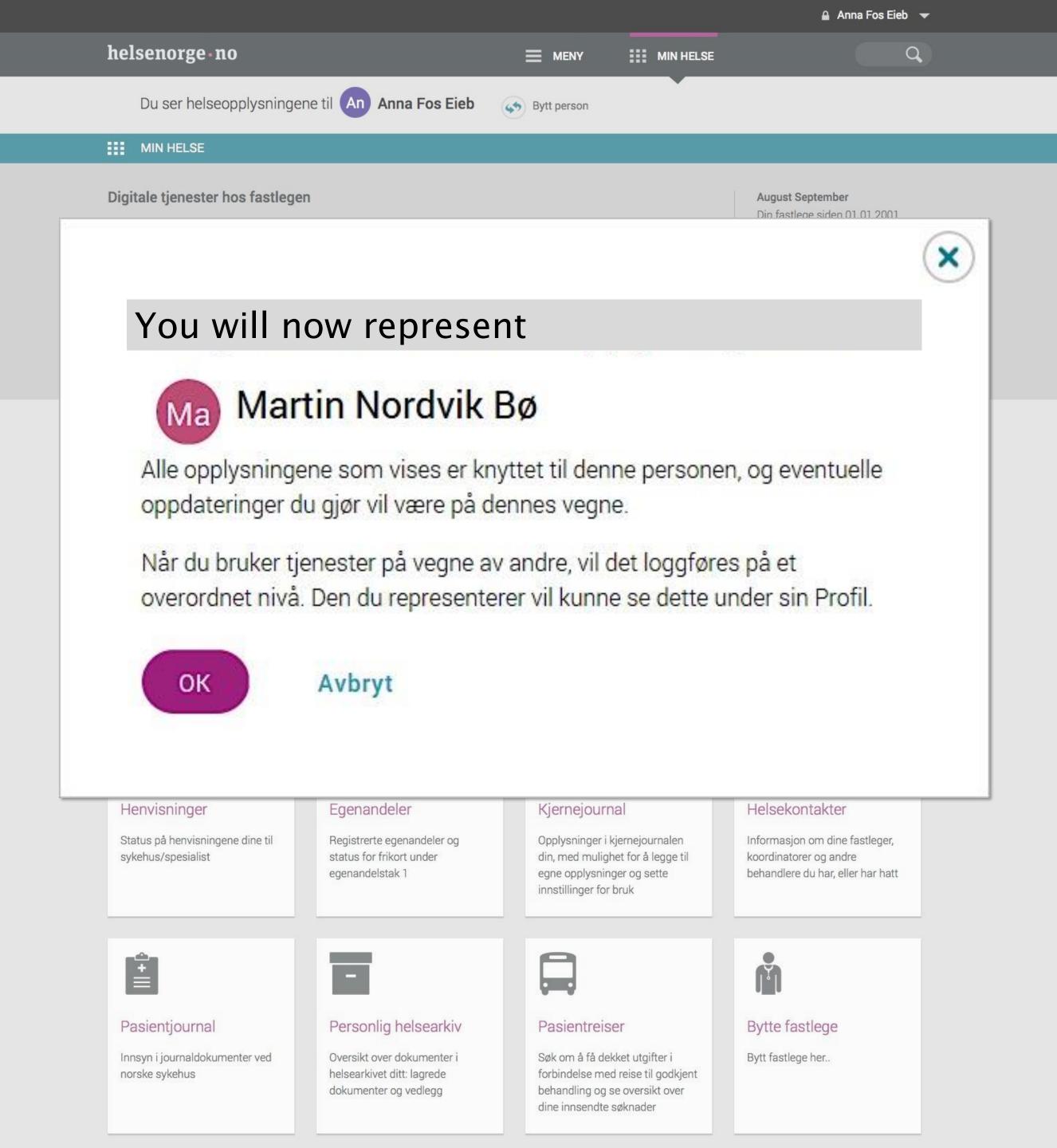
Alerts (e-mail, SMS)

Gain control over one's own health services as well as the receive support from others.



Access for caregivers (relatives): parental rights, authorizations
Privacy: consent, reservation
Contact information
Alerts (e-mail, SMS)

Gain control over one's own health services as well as the receive support from others.



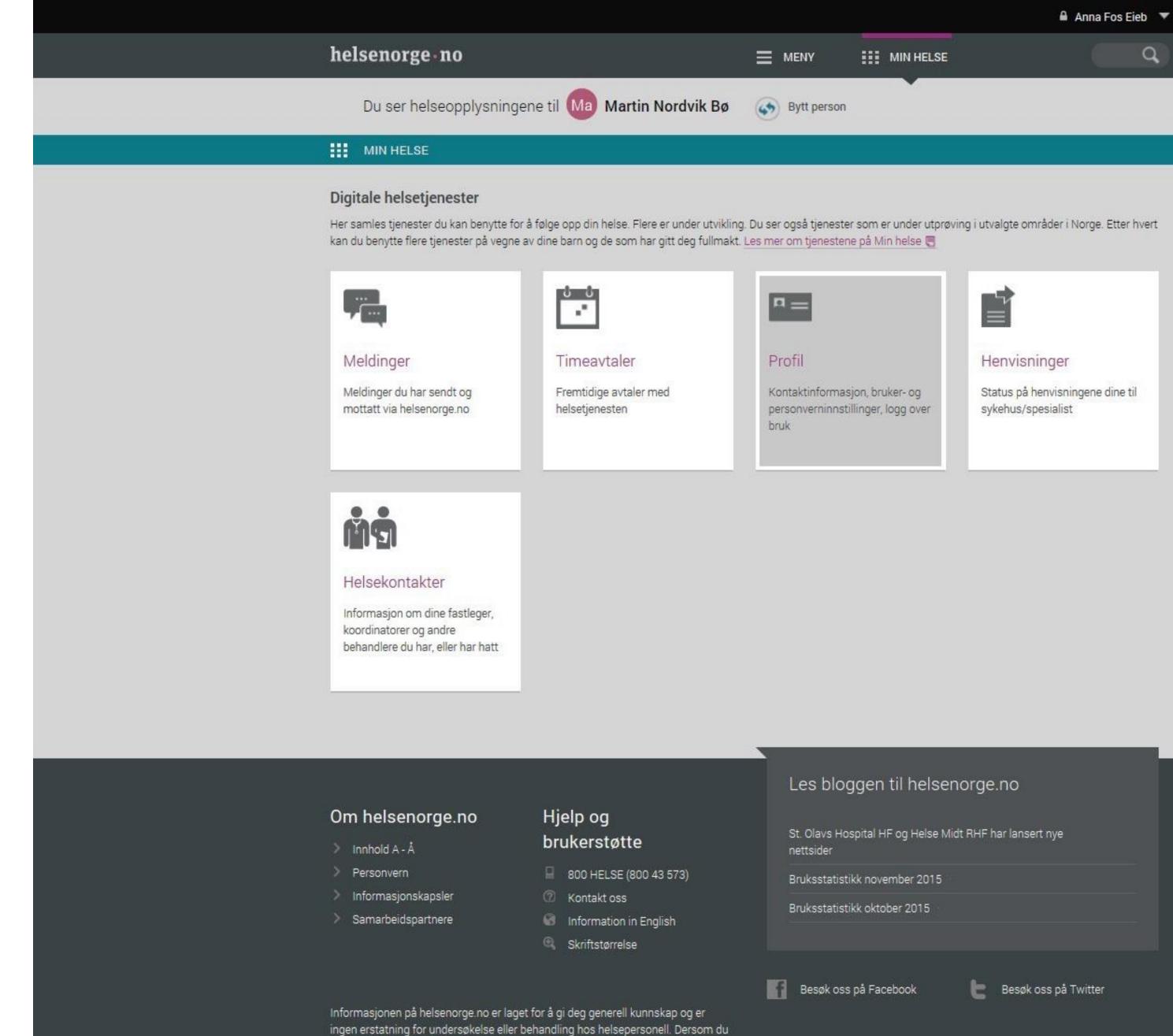
Access for caregivers (relatives): parental rights, authorizations

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Contact information

Alerts (e-mail, SMS)

Gain control over one's own health services as well as the receive support from others.



er syk eller trenger medisinsk hjelp av andre grunner, bør du oppsøke fastlegen. Når fastlegen ikke er tilgjengelig og hjelpen ikke kan vente - ring legevaktnummer

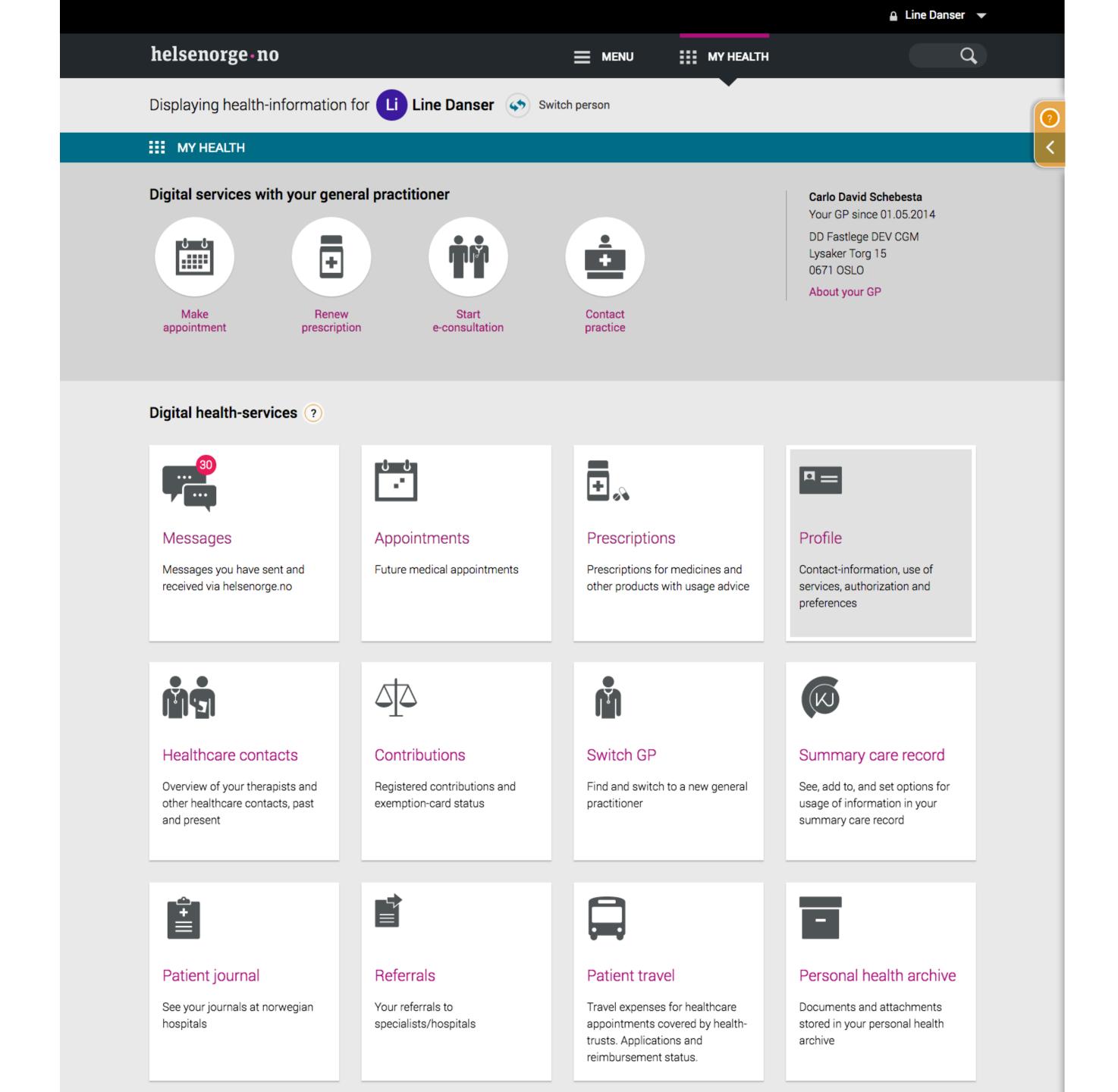
116 117.

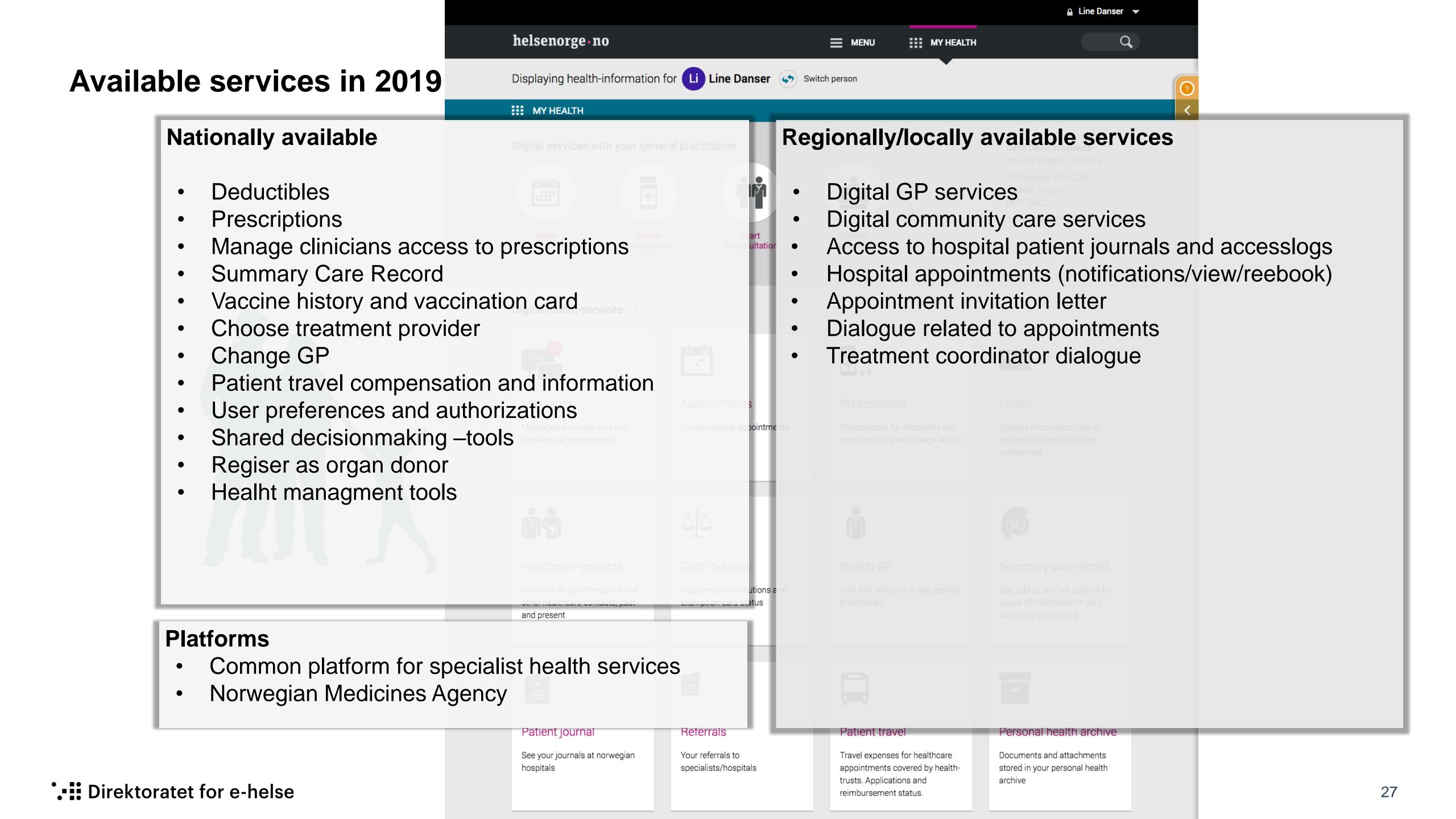
Ring 113 når det er akutt og står om liv.

a

## "My Health" main page

Portal to a variety of services available both nationally and to regional pilot areas.





#### More in 2019 +

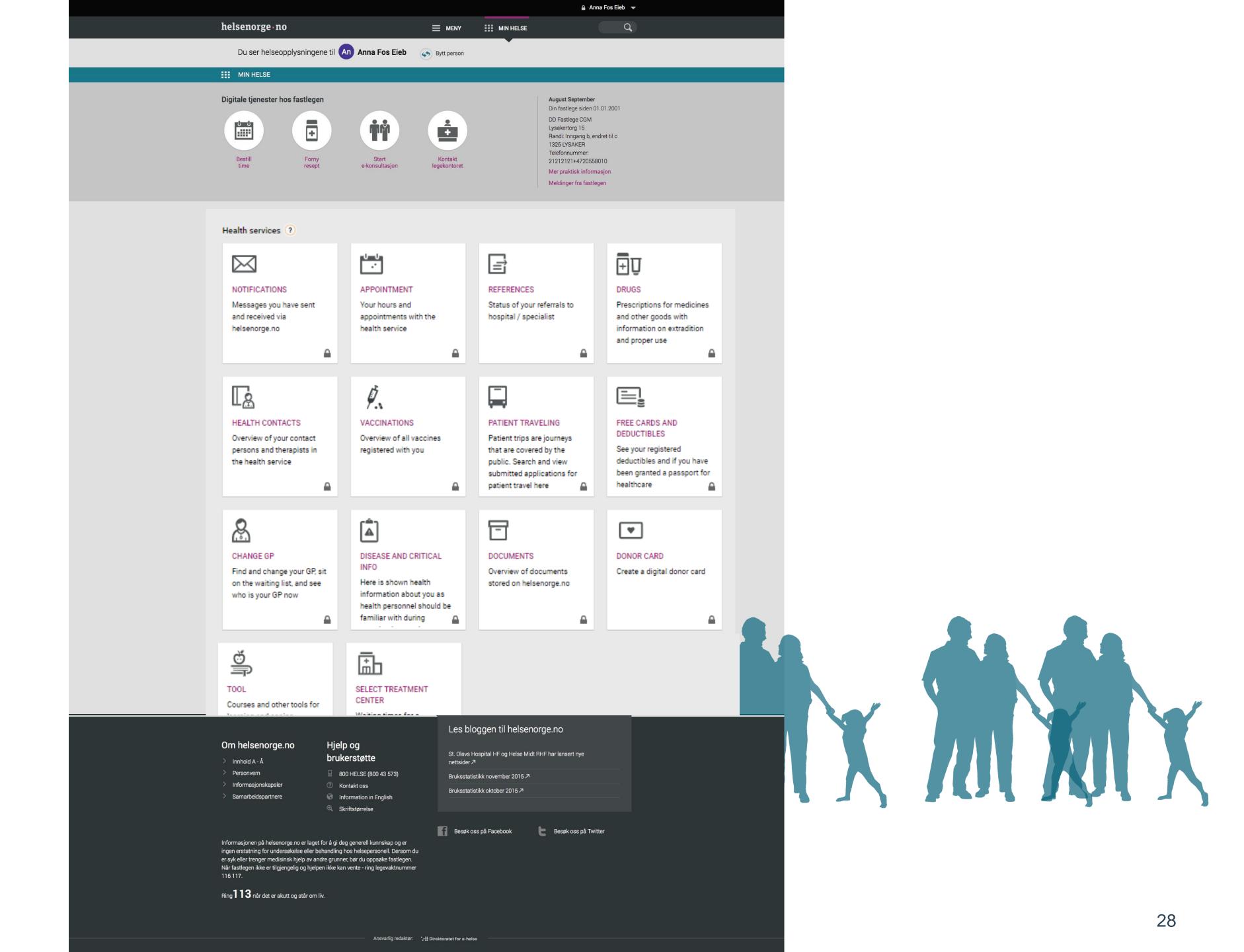
Enhanced dialogue opportunities (video)

Support for knowledge sharing
Access to additional registers and
programs.

Lab test results

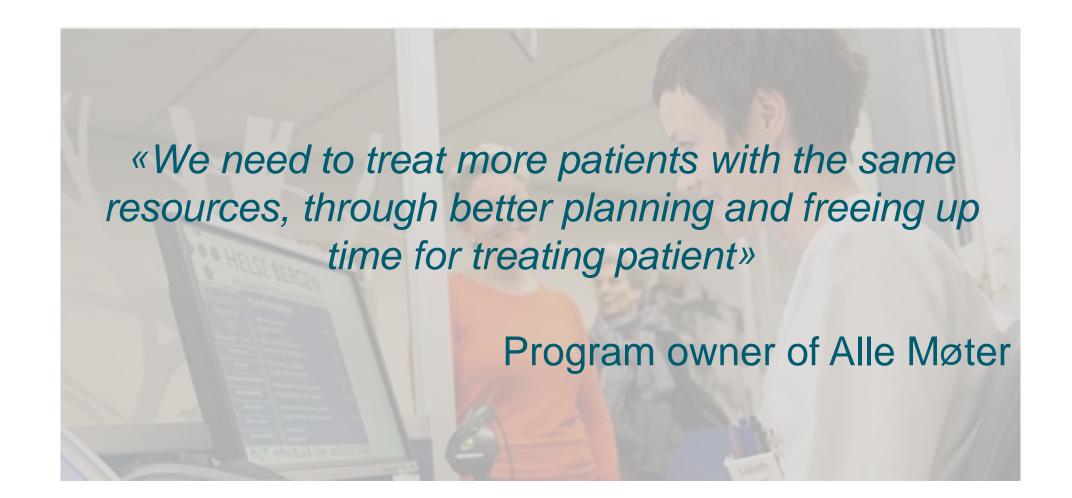
Regional: health stations and home services.

Moving toward the goal of increased competence, involvement and mastery of one's own condition.



# Digital solutions are designed to improve services for patients and care providers as well as support more effective and efficient ways of working.

- Doctors and nurses
- Hospital and clinic management
- Research
- Heath management
- Patients and care providers



«I would like higher quality consultations, better preparation in advance of consultations, better organization, better control regimes, better follow-up of the patient. I believe that technology can help me with this.

GP at helsenorge.no

"All researchers who work with biological material are required to make information available to participants."

"Participants should be able to follow their contributions to exciting medical breakthroughs and improvements to medical practice."

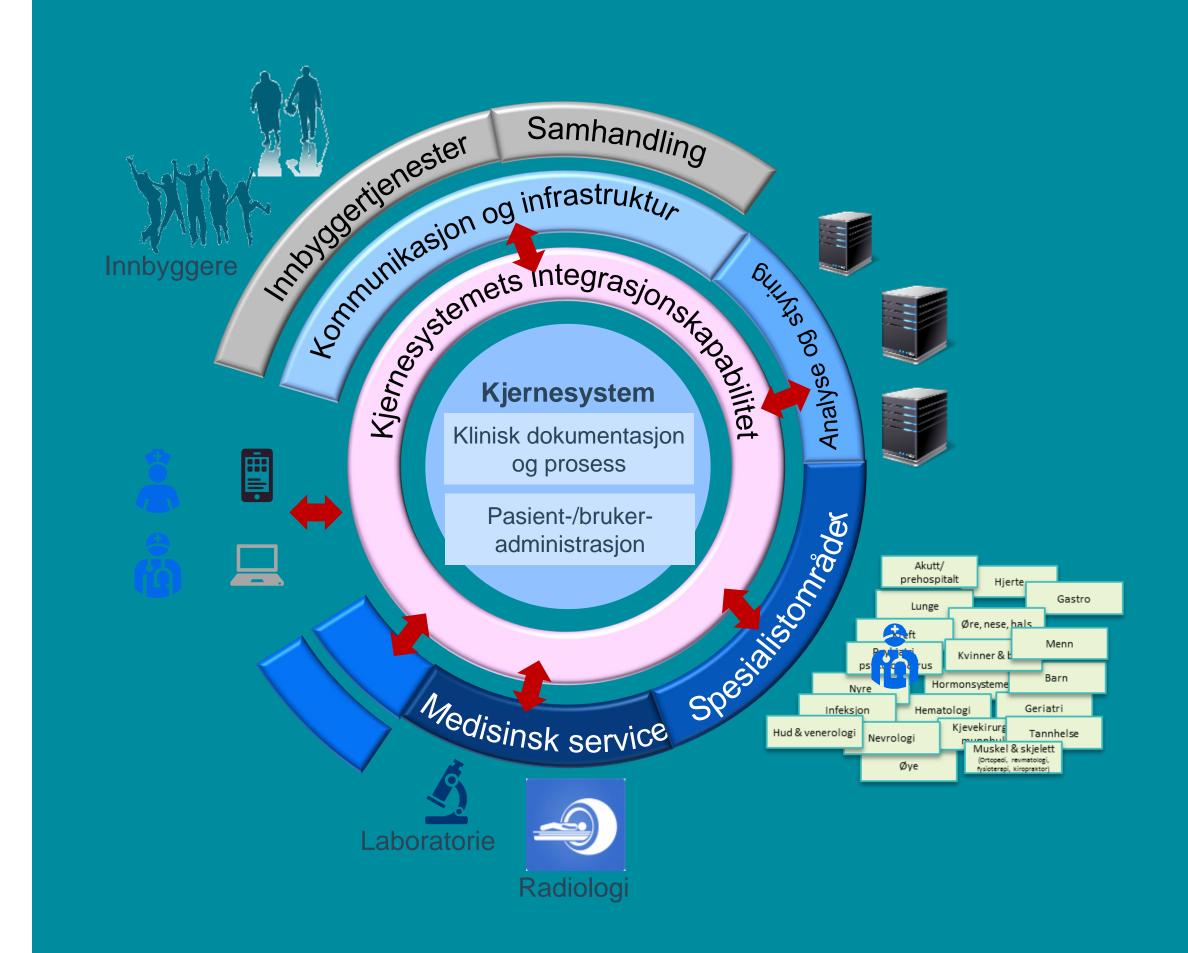
Leader of clinical biobank

## Success factors

- Clear management and goals; active cooperation
- Get participation of the entire health system (specialist care, GPs and primary care services)
- Involve private sector
- Facilitate innovation
- Marketing
- Demonstrate benefits

# We contribute to create the healthcare of the future

- New digital services built upon existing infrastructure
- New core systems will be introduced
- Easier to create even better services

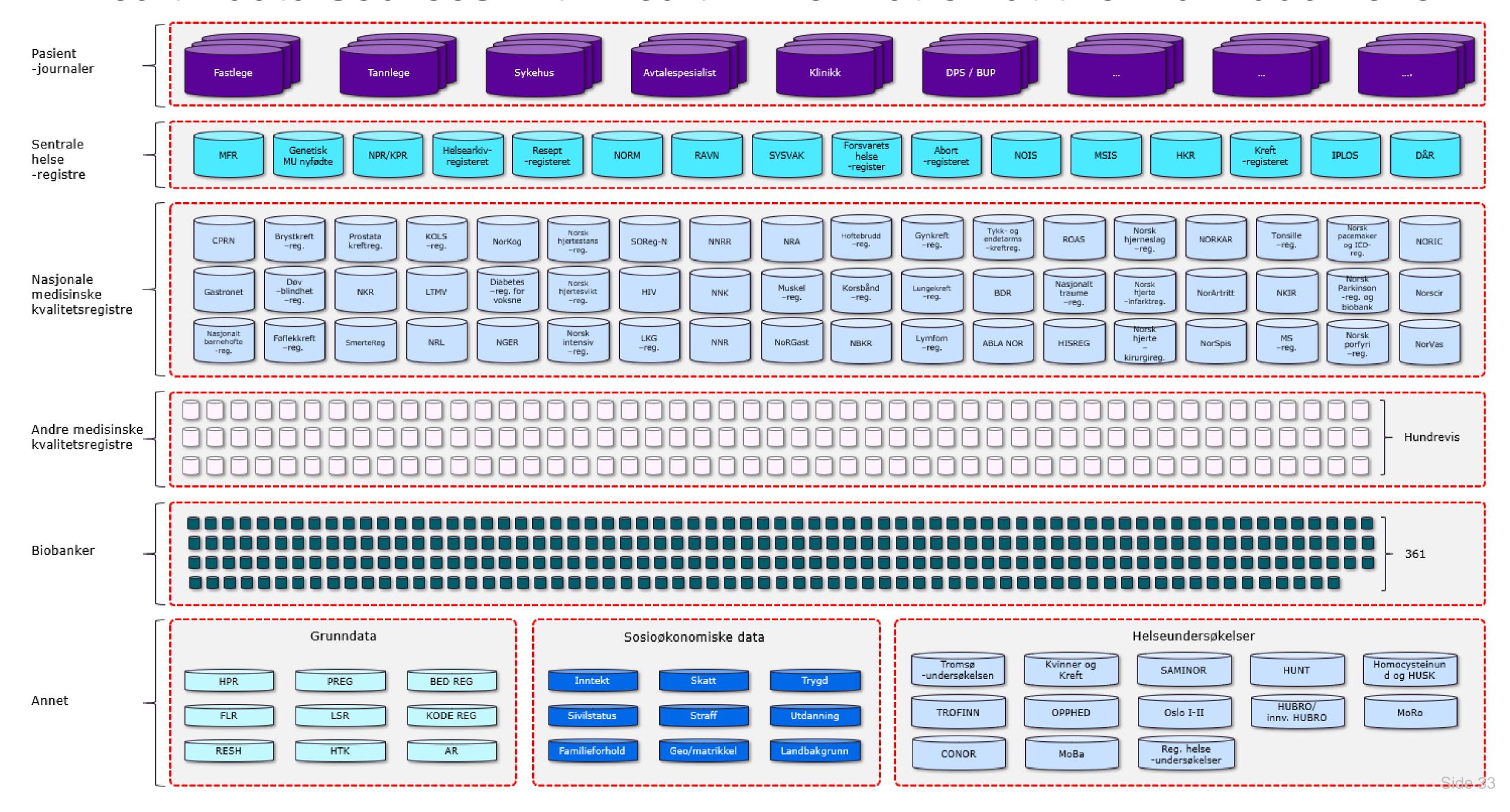




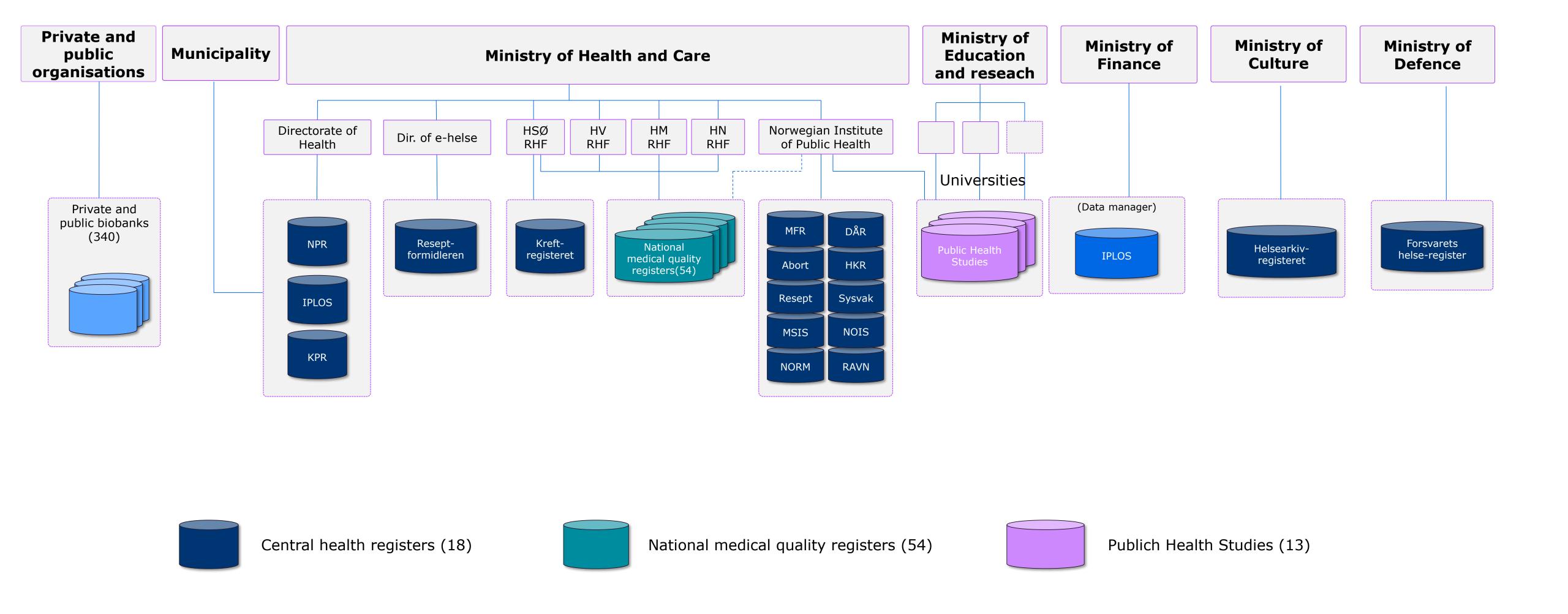
## Data integration and privacy

Senior Adviser Anders Långberg

## Health data sources with health information at the individual level



## Organisation of the health registries in Norway is complex





### Applying for data from Norwegian health registries is time-consuming and unpredictable

#### Key figures data delivery

#### 17 MONTHS

Average process time >1 data source

#### 5 MONTHS

Average process time

1 data source

#### 48 MONTHS

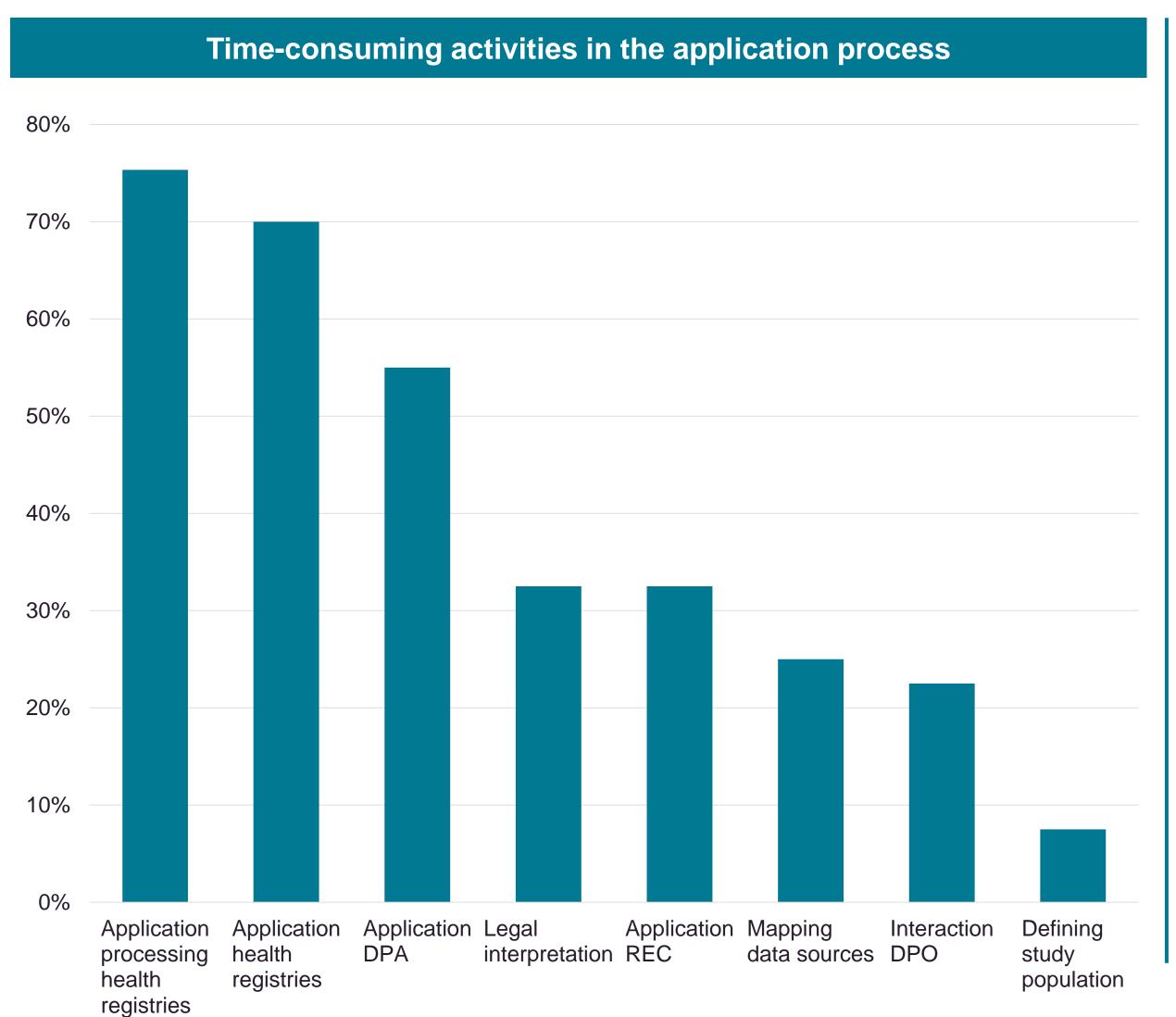
Max process time

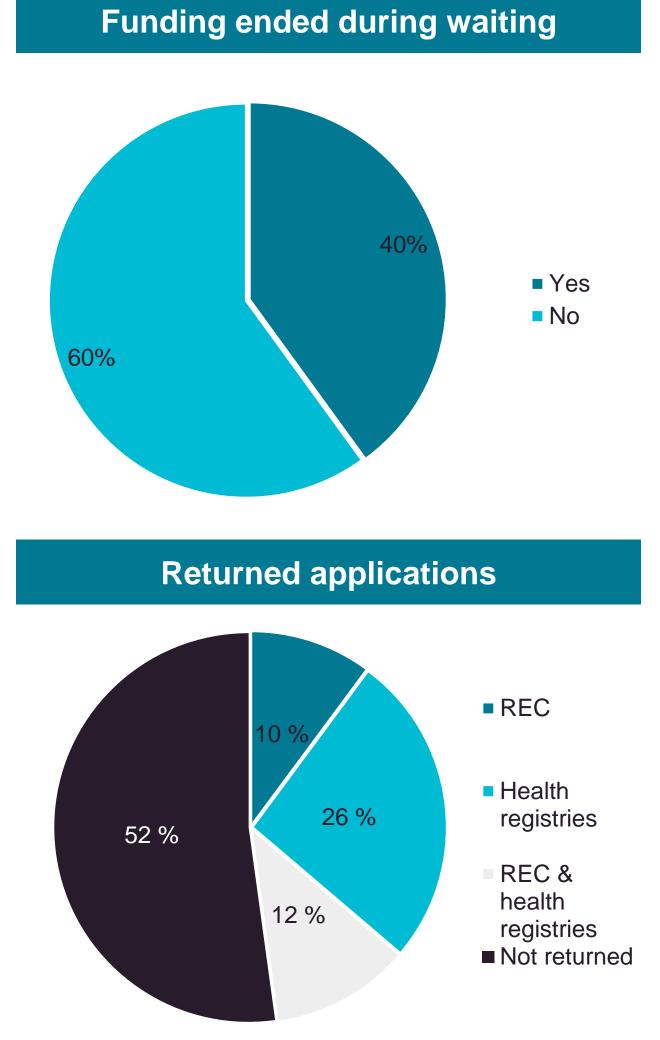
#### 3 WEEKS

Min processing time

#### NOK 140.000

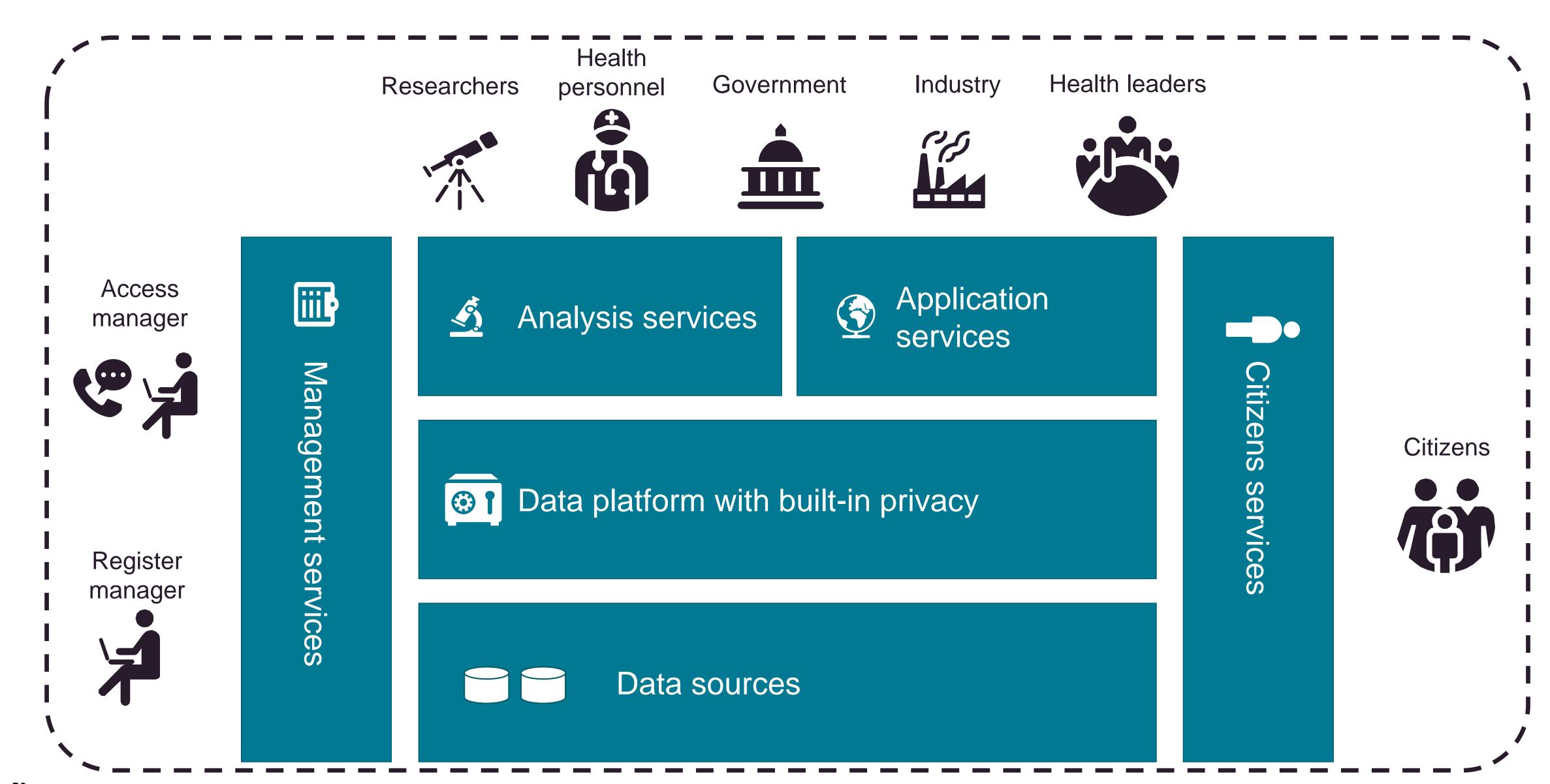
Average cost of data delivery



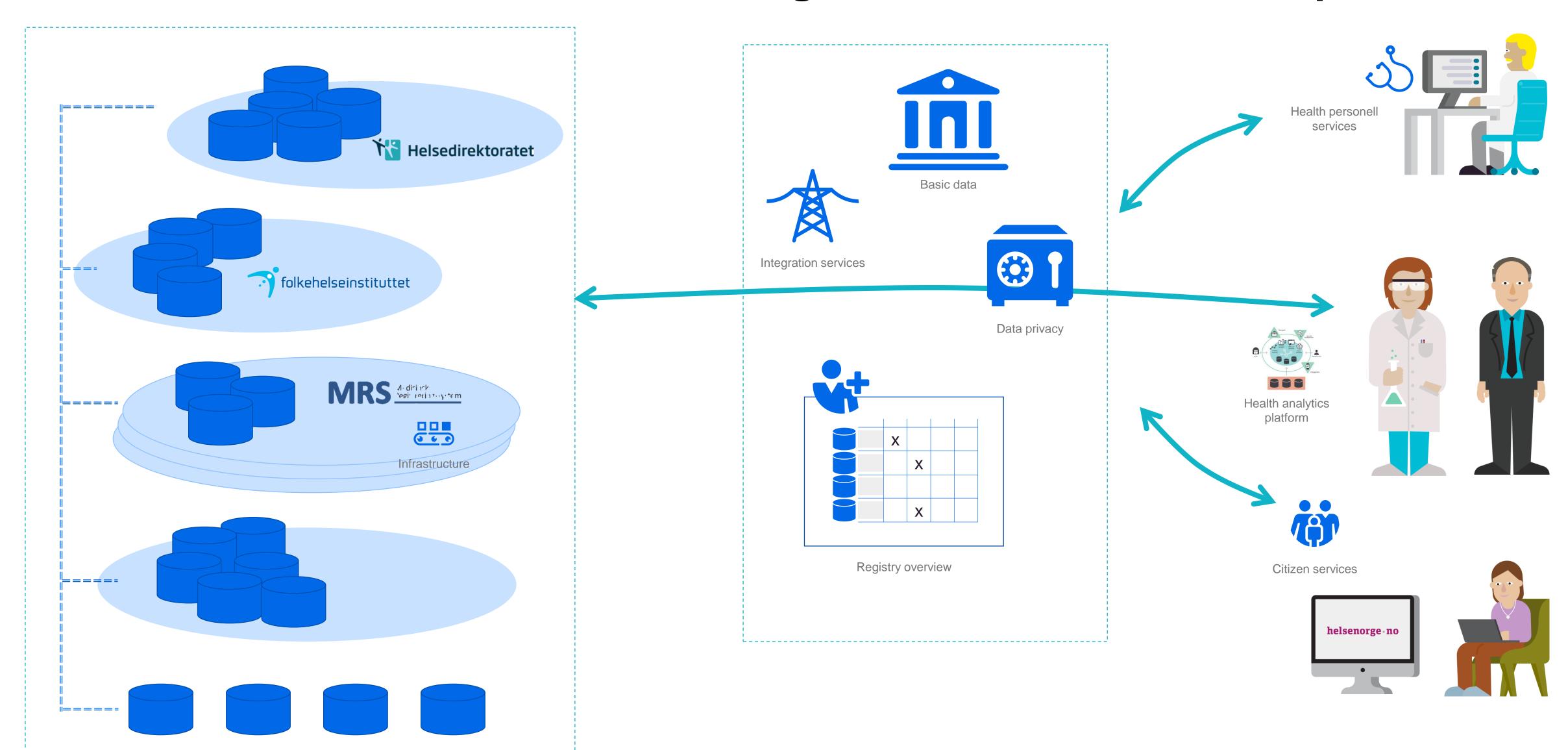




## The Health Analysis Platform

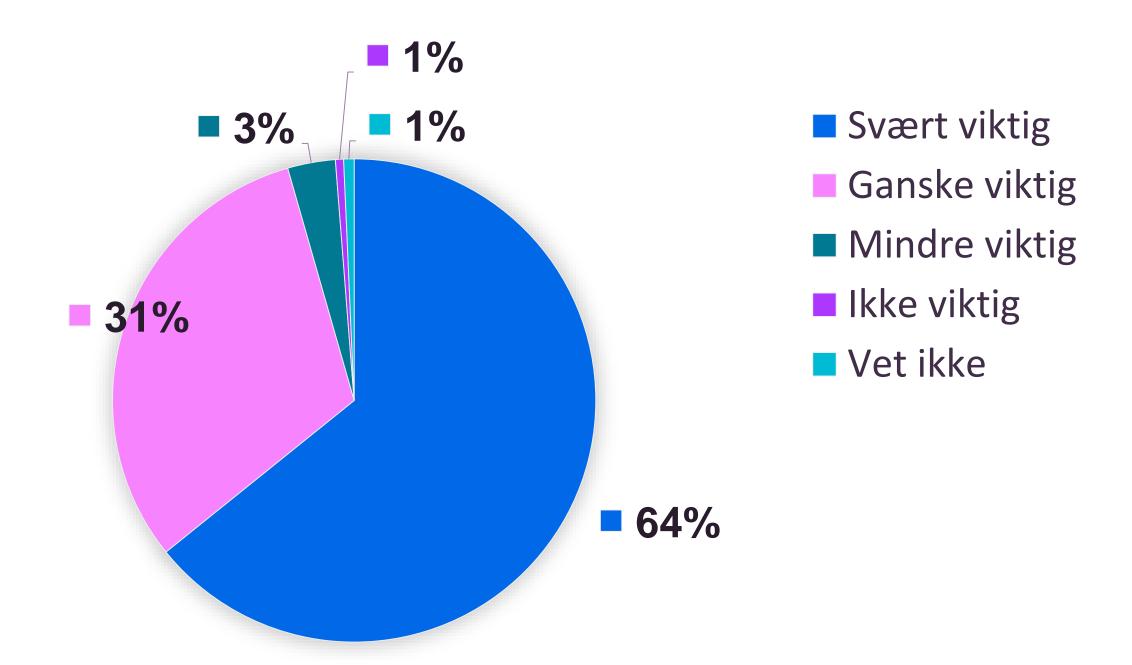


## Services and architecture for an integrated health data landscape

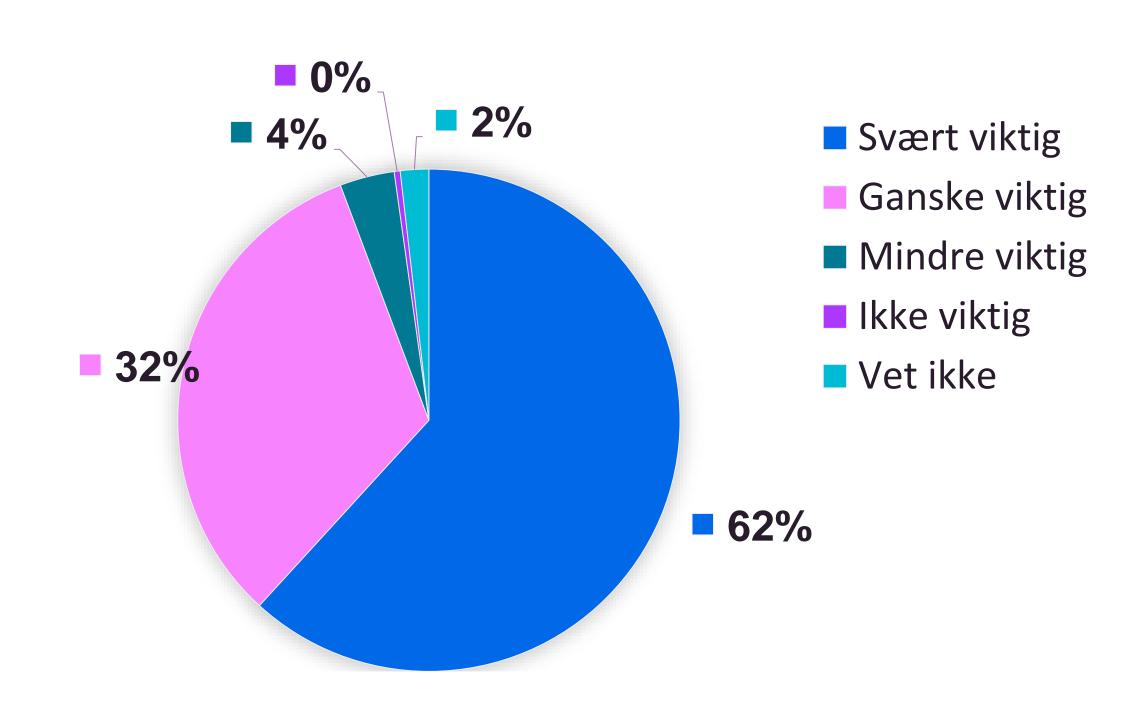


## The citizens demand good data privacy, and control is an essential component

How important is good data privacy for you?

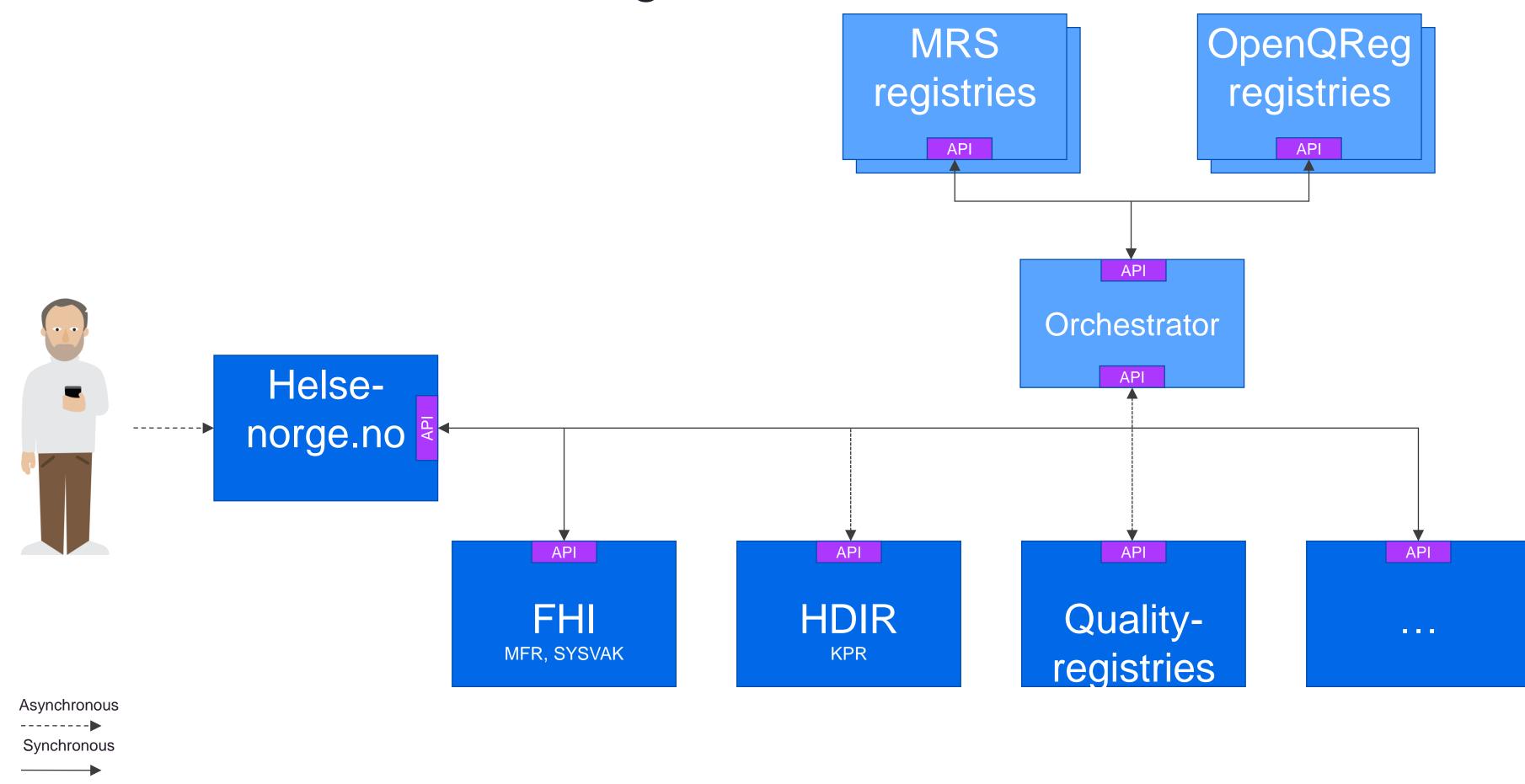


How important is it for you to have control over data about you?

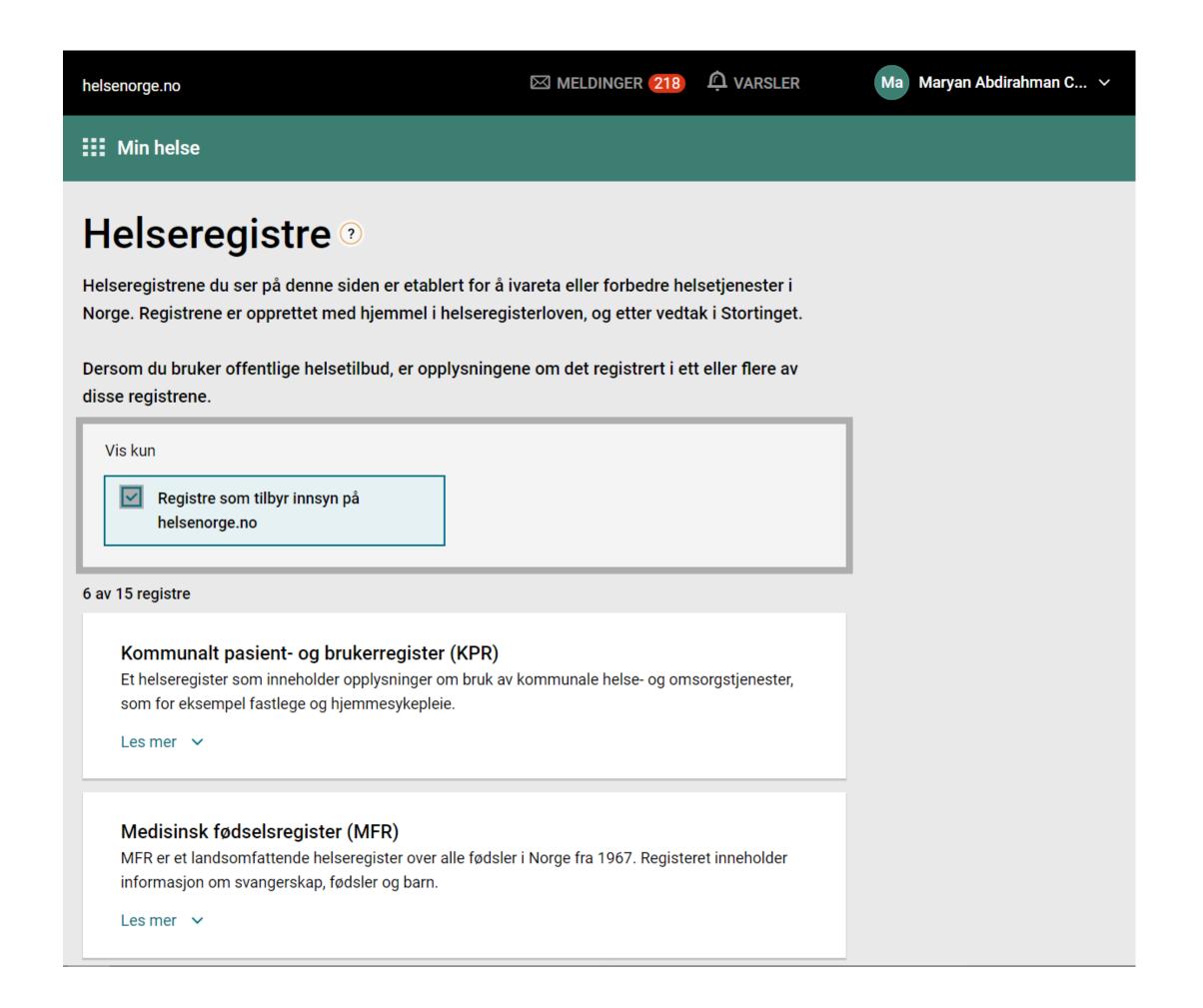


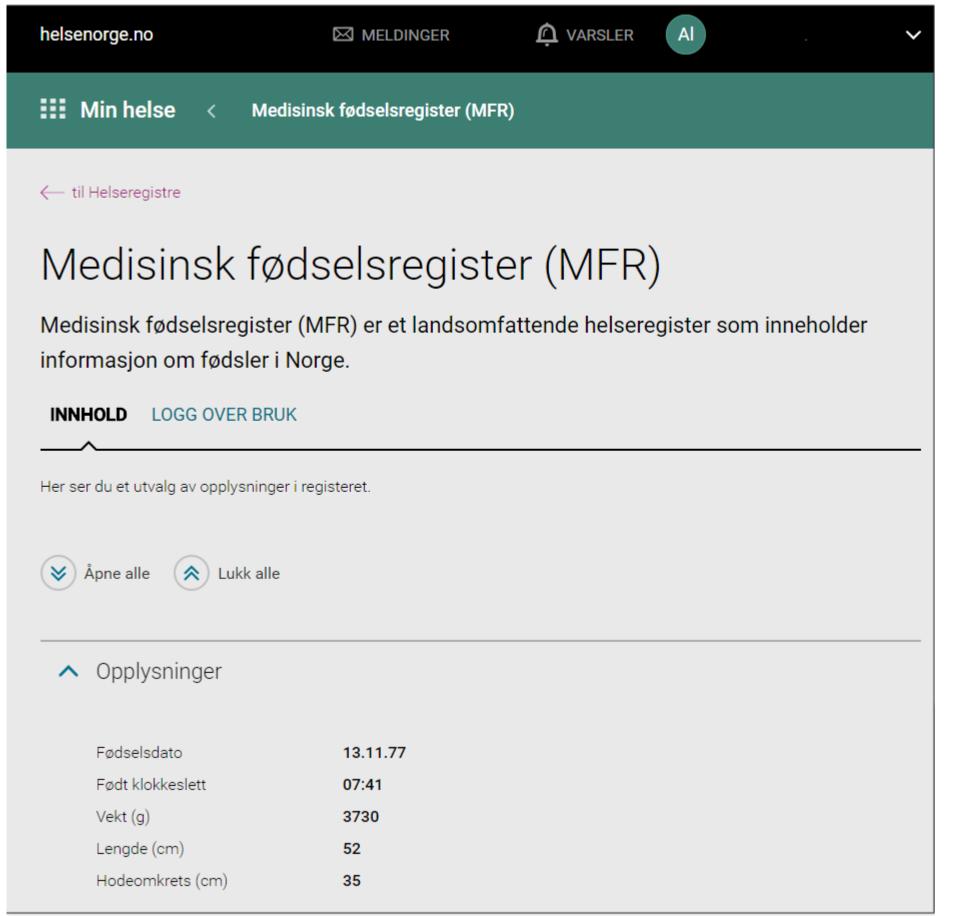
## Conceptual architecture for right of access

For all national health registries



## Access to health registry data on Helsenorge









# Introduction on e-health organisation and solutions and ambitions in Thailand

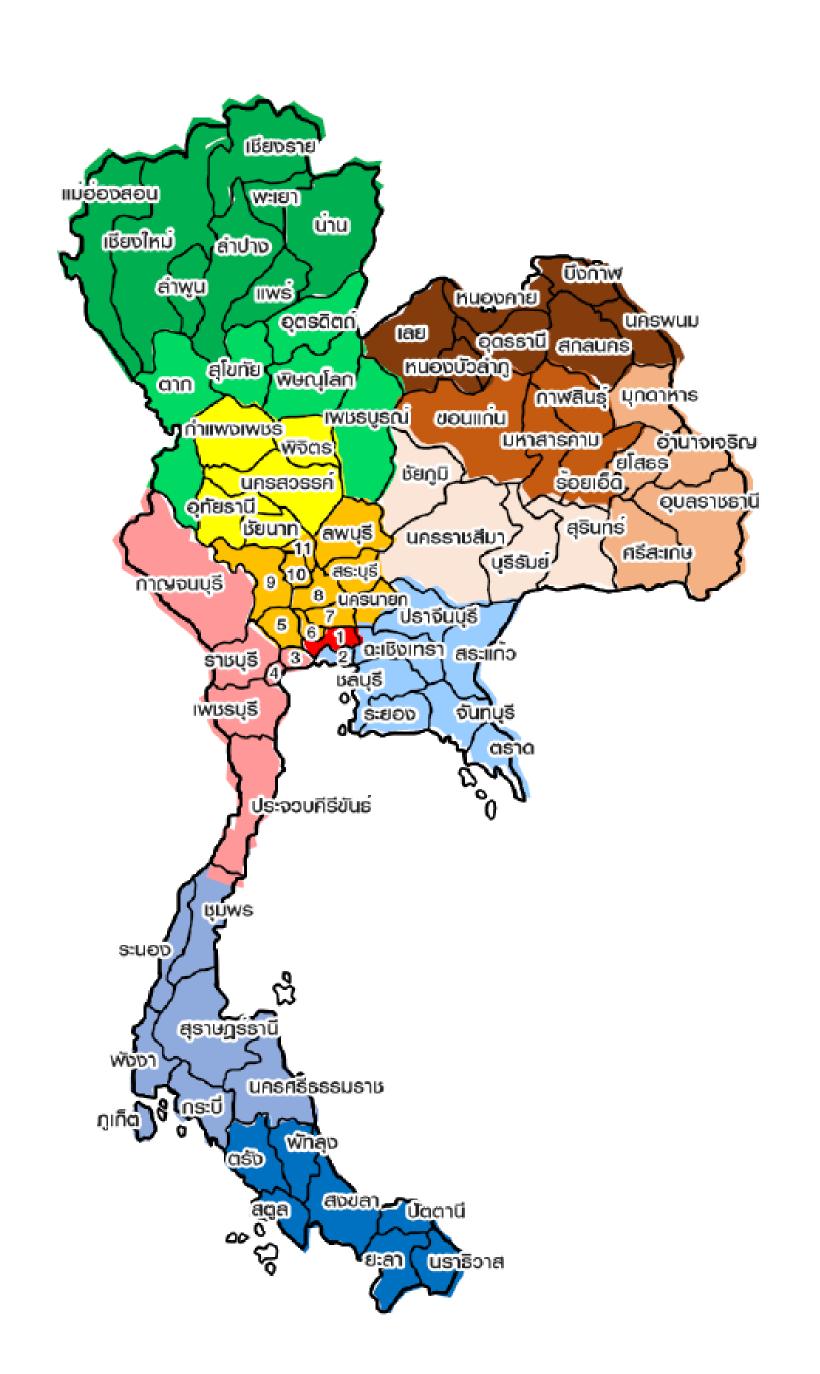
# E-health Organization, Solutions & Ambitions in Thailand

Digital Chief executive officer course 2019

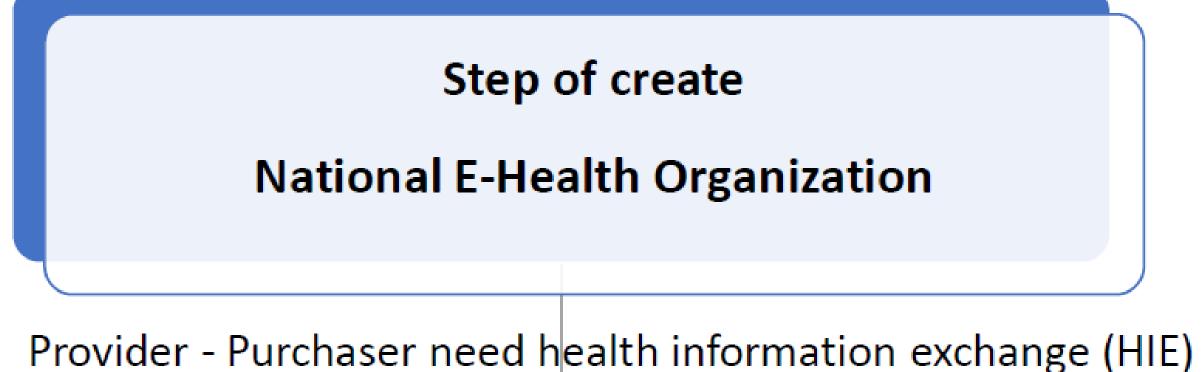
Digital Government Development Agency, Thailand

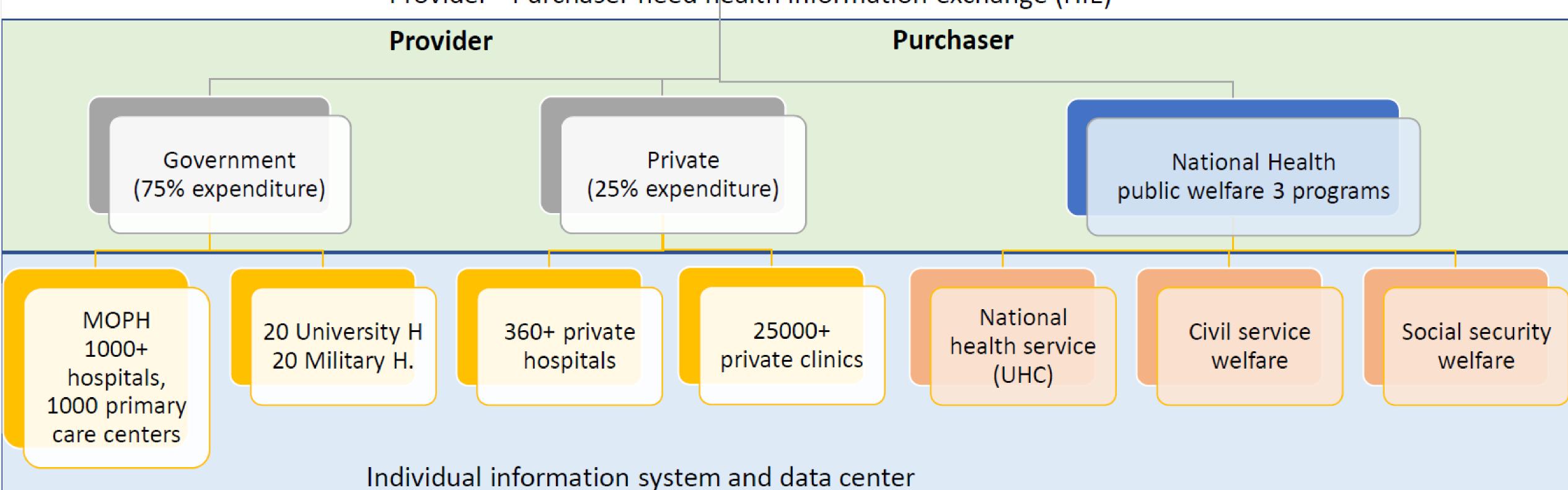
## Thailand healthcare system

- Thailand's population of 68 million, 99.5% of the population have health protection coverage
- Total health expenditures 4.3% of GDP
- Thailand introduced universal health coverage (UHC) reforms in 2001
- 2017, Ministry of Public health (MOPH) provide services through 12 health regions, each region is responsible 3-6 million people, and Bangkok region.



## E-health Organization in Thailand





## Digital Health Solutions

Health data transformation

Referral system

One region one hospital

Health information exchange

Cyber security

National E-health organization

Governance body policy maker

Law & legislation and regulation

Facilitate new technology for digital services

Sustain digital health development

Data analysts
Health IT engineers

Innovation,
Artificial intelligence
Machine learning

Value based health care in Thai context

## **Ambitions: Digital Health to Healthy Thailand**

#### Design Infrastructure Architecture

- Cloud
- Distributed ledger
- Software as a service
- Remoted maintenance

Smart Infrastruc ture



#### Cost effective technology

- E-Services
- E-health literacy







Value based health care
Increase access, safety,
quality base on
appropriate budgets

#### Strategic management

Data driven organization

#### **Develop National HIE**

- Standard of HIE
- Cyber security

Thailand achieved UHC with low levels of spending challenges: rising costs and duplication of resources

