E-Health and e-script in Denmark

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Healthcare DENMARK is a public-private partnership

# Her Royal Highness Crown Princess Mary is patron for Healthcare Denmark

"In Denmark, our focus on putting the patient first – combined with constant efforts to improve efficiency and quality – has resulted in a wide array of innovative healthcare solutions.
I sincerely believe Danish technologies, products and expertise can have a positive impact on global health."

Healthcare DENMARK

- Danish healthcare visitor programs

- Conferences

- Danish delegation visit to other countries

- Communication and press activities

- The Healthcare DENMARK homepage
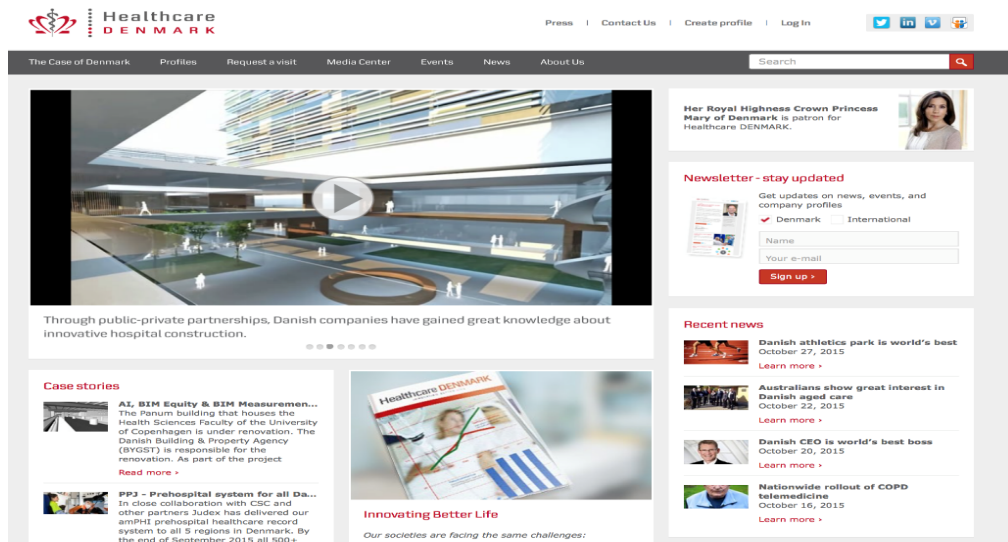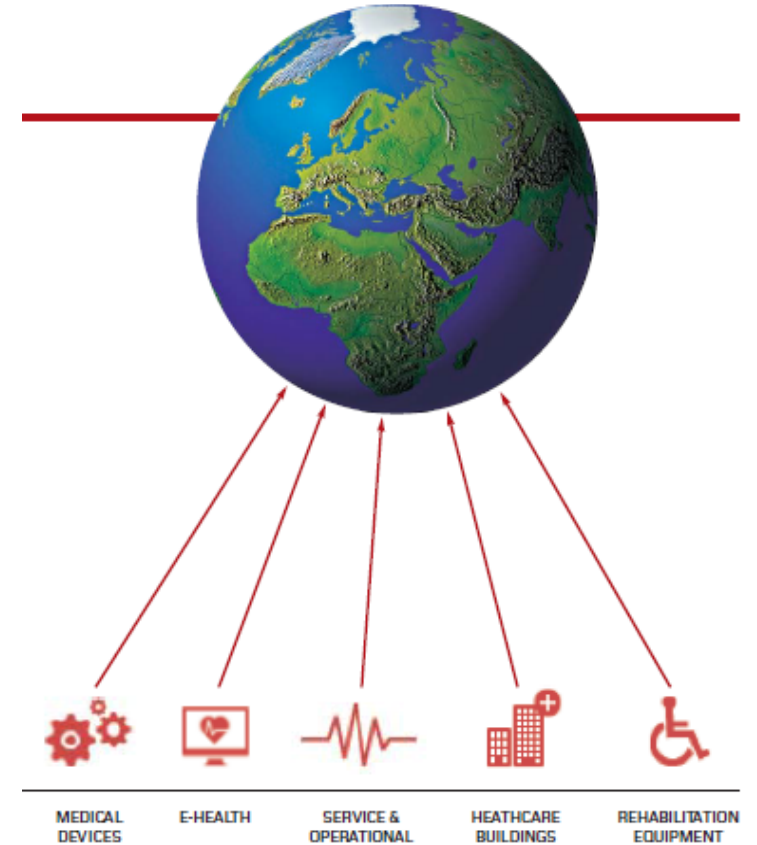
Agenda

- The Danish Healthcare System

- Danish Healthcare strategies and initiatives

- E-health in Denmark

The Danish Healthcare System

Basic Features

Universal Coverage

Free & Equal Access

Financed by general taxes

A high degree of decentralization

Organization of the Healthcare System

National Level

Ministry of Health

Regional Level

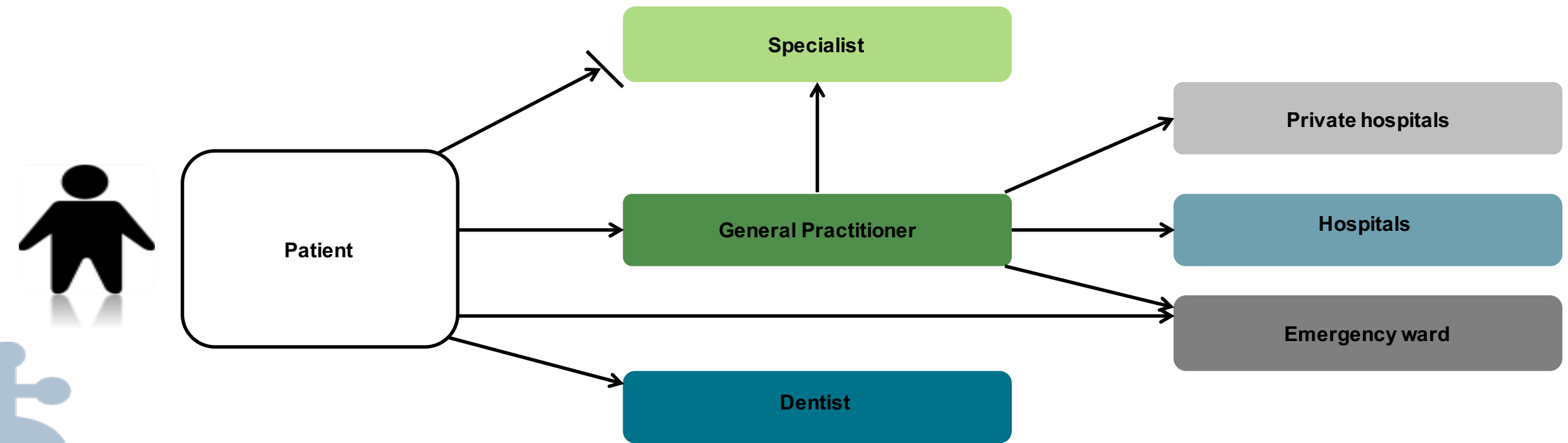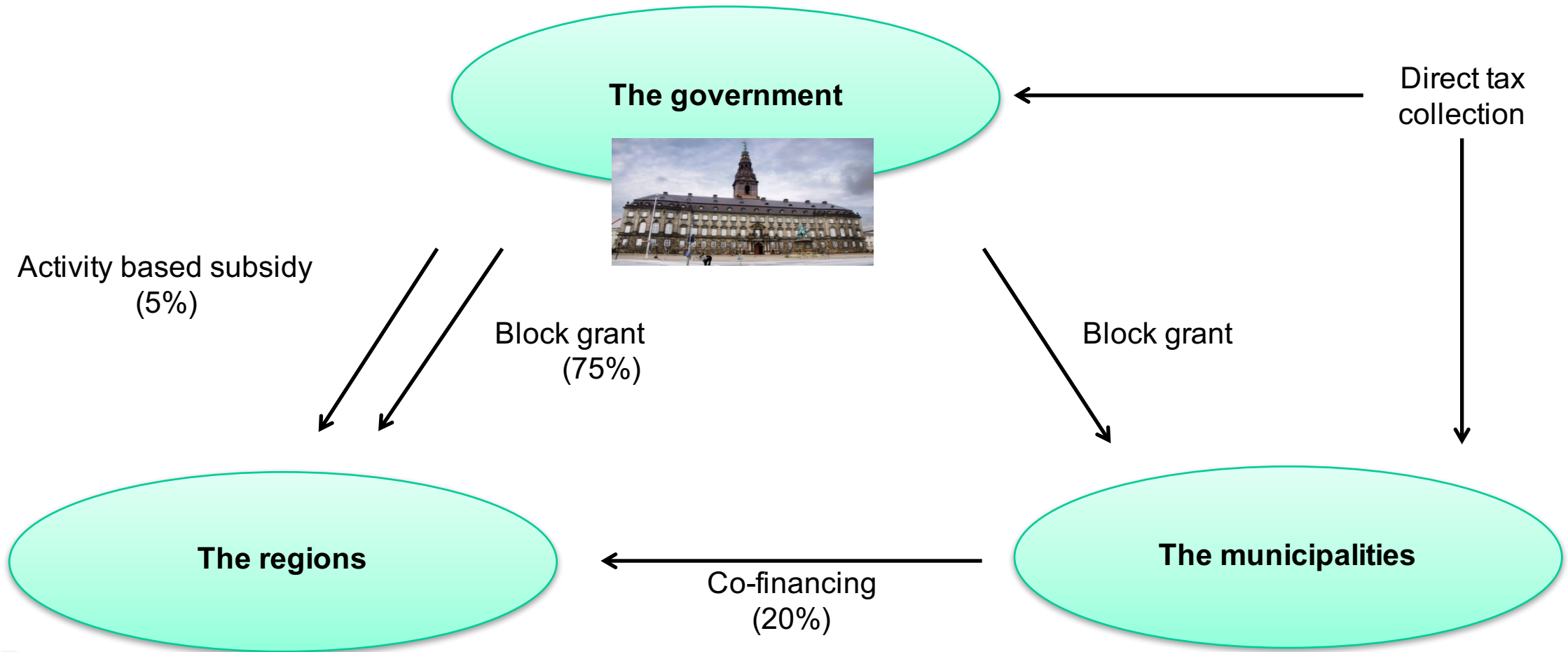5 Regions

Local   Level

98 Municipalities

Where to go to if you get ill?

Patient

Specialist

General Practitioner

Dentist

Private hospitals

Hospitals

Emergency ward

MINISTRY OF HEALTH

Financing Healthcare

The government

Direct tax collection

Activity based subsidy (5%)

Block grant (75%)

Block grant

The regions

Co-financing (20%)

The municipalities
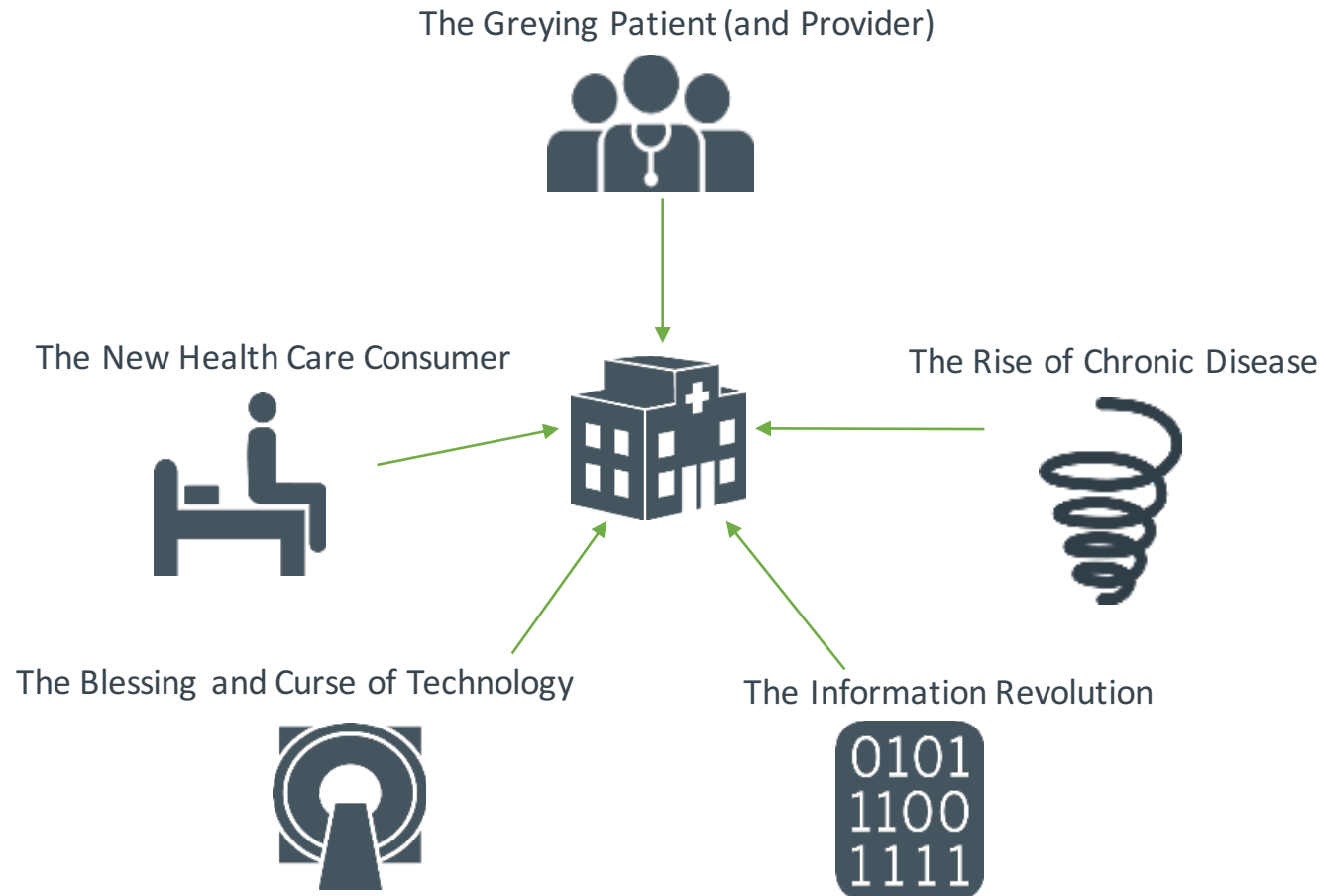
MINISTRY OF HEALTH

Agenda

- The Danish Healthcare System
- **Danish Healthcare strategies and initiatives**
- E-health

The burning platform:
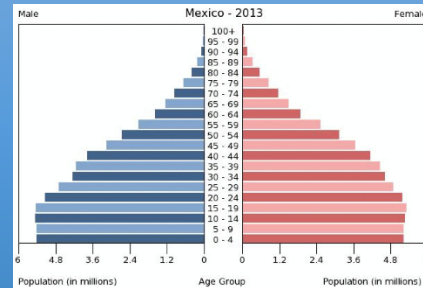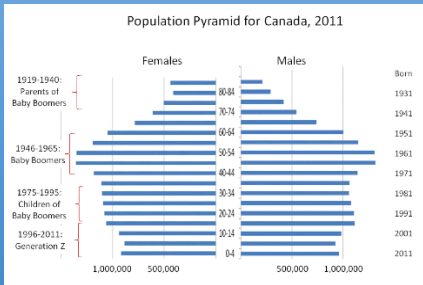# Five Forces Influencing Health Care's future

The Greying Patient (and Provider)

The New Health Care Consumer

The Rise of Chronic Disease

The Blessing and Curse of Technology

The Information Revolution

All countries face the same healthcare challenges
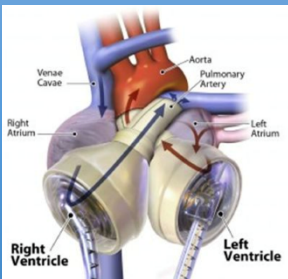
Healthcare challenges

Demographics

Life style
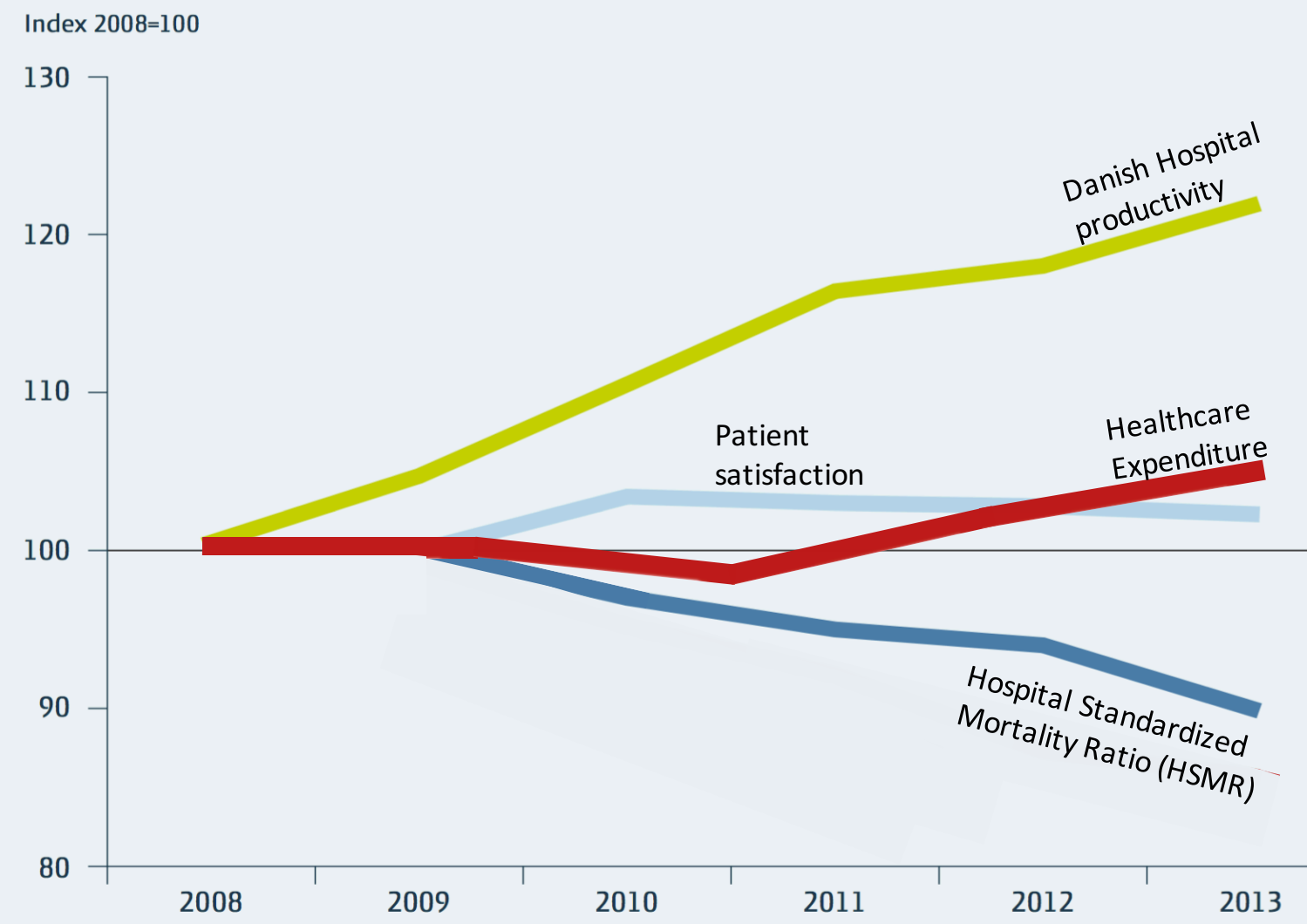

New treatments

Denmarks initiatives

- **Early detection of critical diseases, population health initiatives and patient empowerment**
  - Early detection of diseases and immediate start of treatment
    - Nationwide screening
    - Fast access to diagnostics
  - Population health and prevention initiatives
  - Primary healthcare clinics
  - E-health, telehealth and patient empowerment
  - Ambient Assisted Living
  - Personalized Medicine

- **High quality and effective hospital treatment**
  - High quality treatment
  - More outpatient treatment
  - "Just-in-time" coordination and logistics

Danish citizens are happy with their lives and with healthcare services

Index 2008=100

Danish Hospital productivity

Patient satisfaction

Healthcare Expenditure

Hospital Standardized Mortality Ratio (HSMR)

Life satisfaction and happiness: #1

Satisfaction with health: #2

Access to healthcare: #2

Health services: #4

1
2
3
4

**Denmark ranking,
Quality of life in Europe report 2012**

The Danish eHealth and Telehealth plan

- National EHR and E-health architecture
- International standards
  - HL7
  - Continua Health Allicance
- First fully regional telehealth implementations
- Coordinated strategy:
  - Ministry of Health
  - Danish Regions
  - Danish Municipalities

THE DANISH GOVERNMENT

LOCAL GOVERNMENT DENMARK

DANISH REGIONS

MAKING eHEALTH WORK

NATIONAL STRATEGY FOR DIGITALISATION OF THE DANISH HEALTHCARE SECTOR 2013-2017

The Digital Health strategy 2018-2022

JANUAR 2018

Ét sikkert og sammenhængende sundhedsnetværk for alle

STRATEGI FOR DIGITAL SUNDHED 2018–2022

5 main objectives based on 27 initiatives

2. Integrated Care

1. Patient Reported Outcomes

3. Population Health and Prevention

5. The National Health-IT Architecture
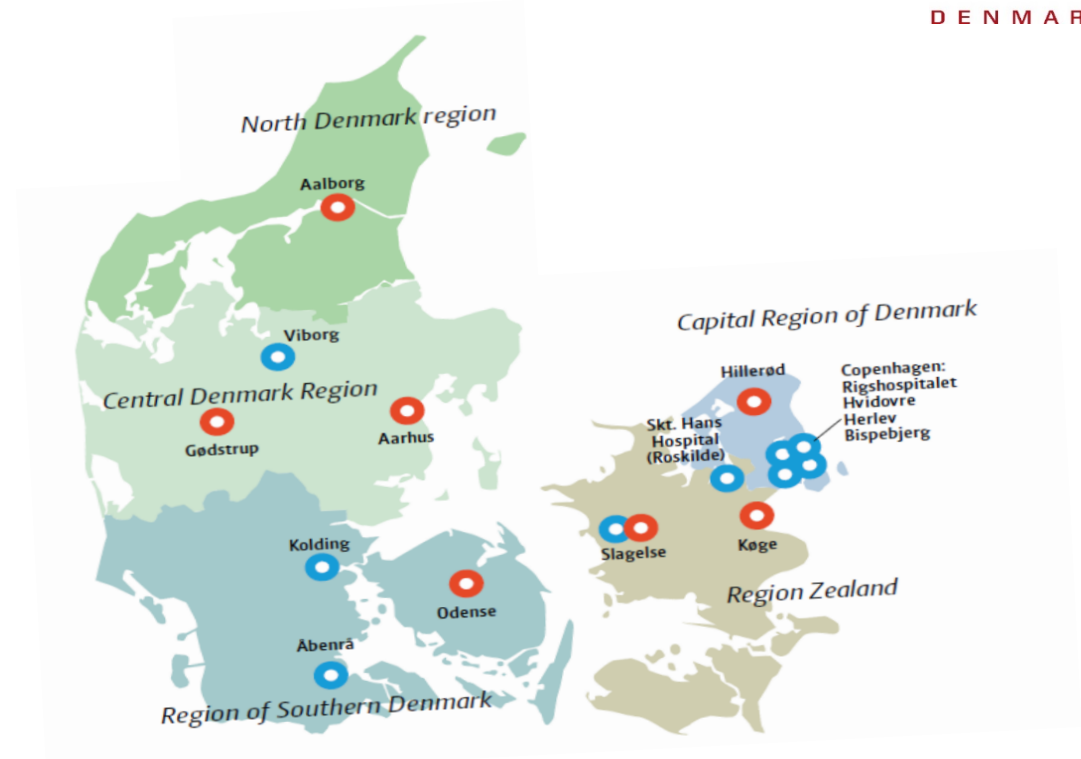
4. Data security and confidence

The eHealth and telehealth strategy will align with the 2013 – 2020 Assisted Living strategy

- **Full scale implementation of proven solutions**
  - Ceiling lifts
  - Digital rehabilitation
  - Selected robot technology
- **Full scale Smart Home implementation**
- **Smart Home technology for disabled citizens**
- **Coordinated strategy:**
  - Ministry of Health and Prevention
  - Danish Regions
  - Danish Municipalities

COMMON PUBLIC-SECTOR
STRATEGY FOR DIGITAL WELFARE
2013-2020

THE DANISH GOVERNMENT
LOCAL GOVERNMENT DENMARK
DANISH REGIONS
SEPTEMBER 2013

DIGITAL WELFARE
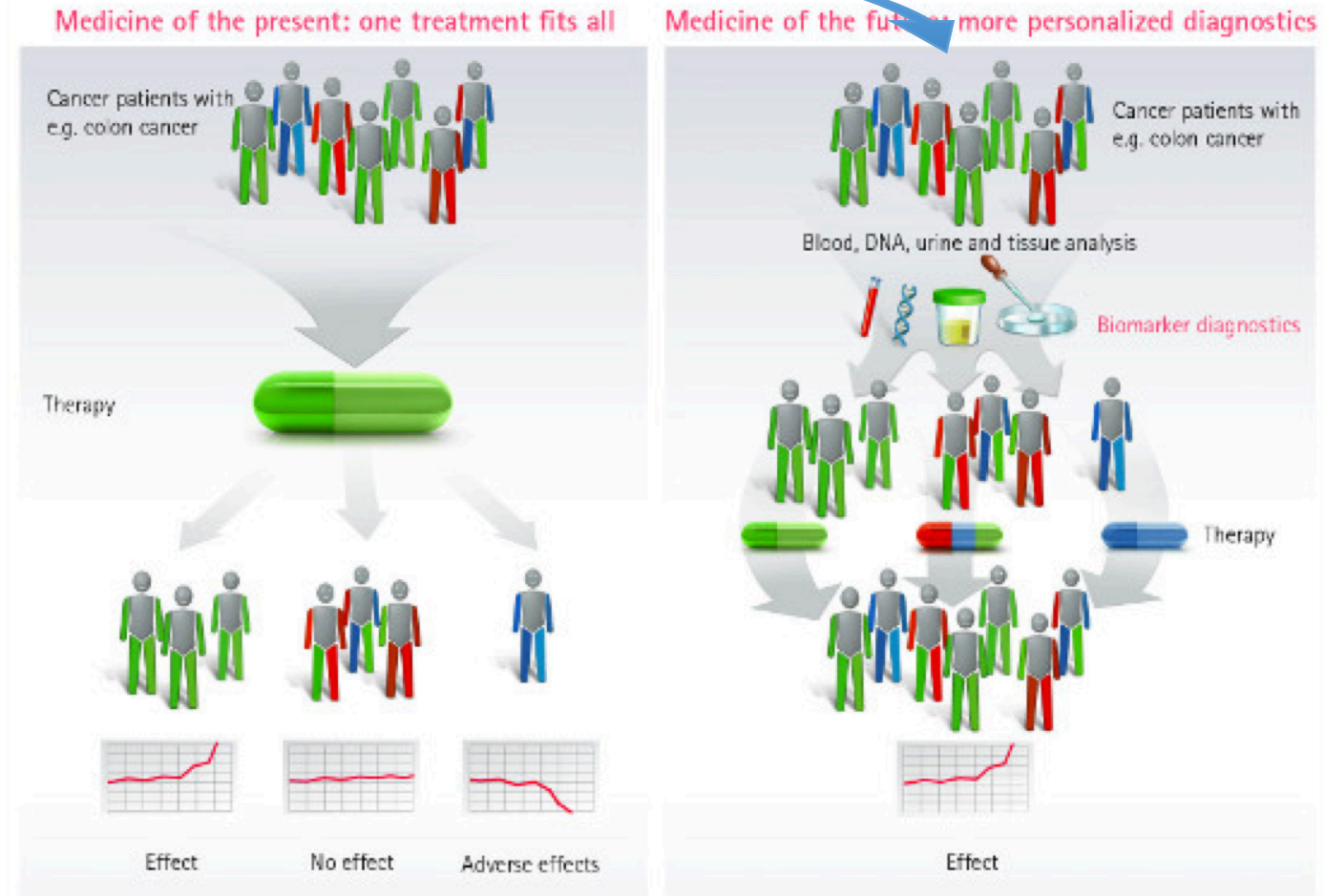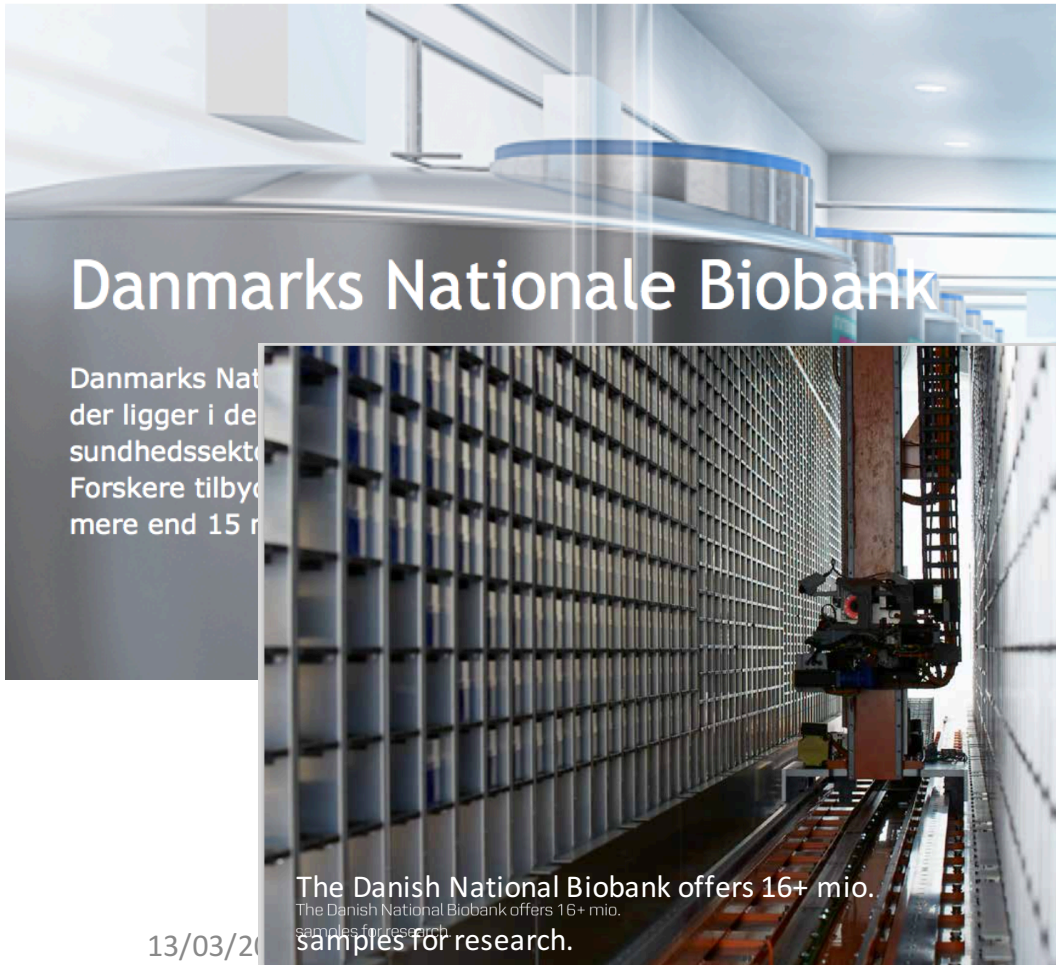EMPOWERMENT,
FLEXIBILITY AND EFFICIENCY

16 new hospitals will be the backbone of patient centric healthcare

- **Public-private partnerships**
- **New innovations**
- **Danish design**
- **Green technology**

Personalised Medicine will increase treatment efficiency and reduce adverse effects:

Danmarks Nationale Biobank

Danmarks Nat
der ligger i de
sundhedssekt
Forskere tilby
mere end 15

The Danish National Biobank offers 16+ mio. samples for research.

Medicine of the present: one treatment fits all

Cancer patients with e.g. colon cancer

Therapy

Effect   No effect   Adverse effects

Medicine of the future: more personalized diagnostics

Cancer patients with e.g. colon cancer

Blood, DNA, urine and tissue analysis
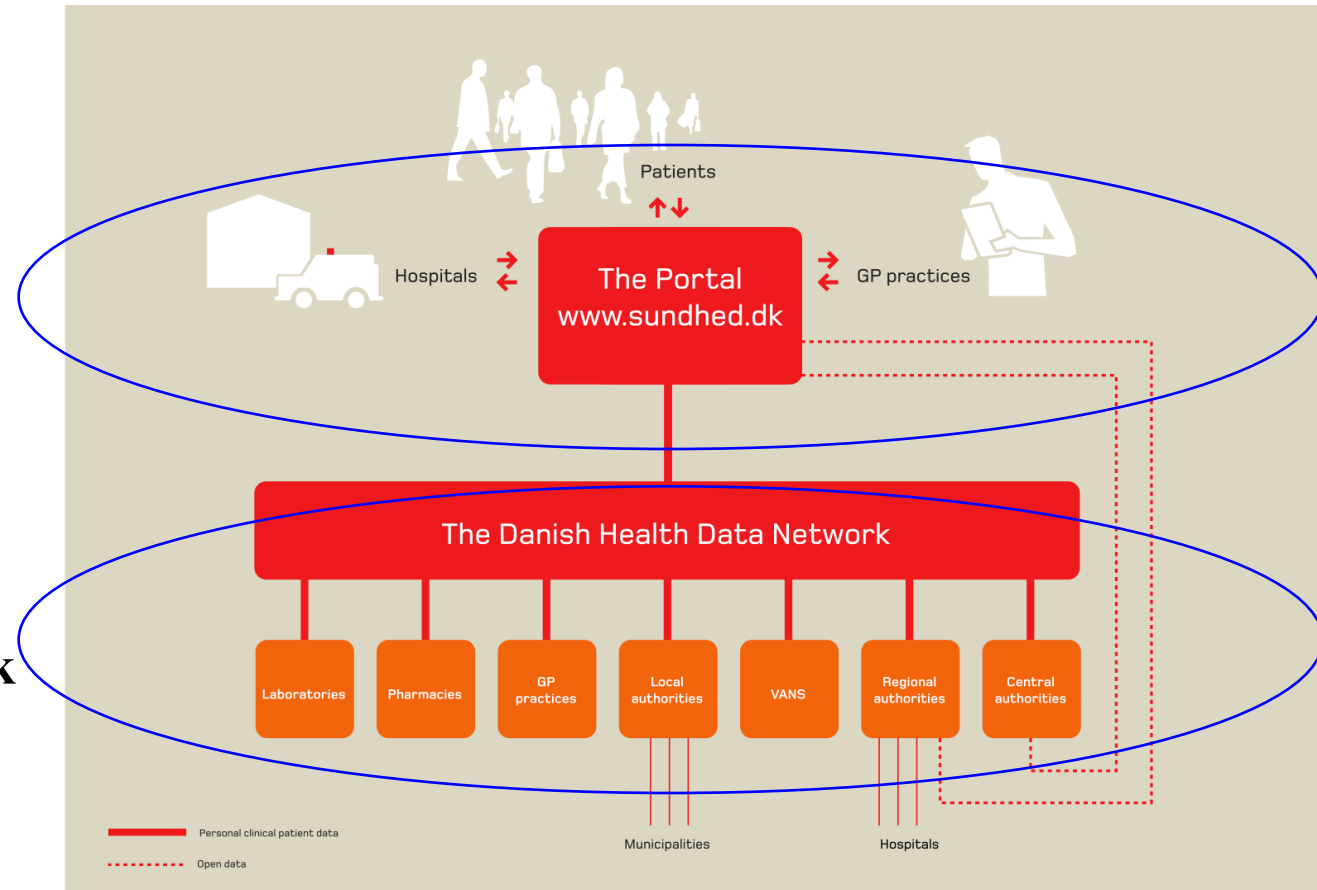
Biomarker diagnostics

Therapy

Effect

Agenda

- The Danish Healthcare System

- Danish Healthcare strategies and initiatives

- E-health

A long term focus on health data networks and on e-health provide efficient access to healthcare information

Sundhed.dk
E-health Portal
2003 -

MedCom
Health Data Network
1994 -

Who is behind?
Ministry of Health, Danish Regions, Ministry of Interior, National Association of Local Authorities, National Board of Health, Copenhagen Hospital Corporation, Danish Pharmaceutical Association

SERVICES FOR CITIZENS

- **Access to personal health data on treatment**
  - **E.g. e-Record from hospitals and GPs and Shared Medication Card**
- **Communication with health care providers**
  - **E.g. Contact information and e-services like booking, prescription renewals and electronic communication**
- **General information on health service**
  - **E.g. quality in health care, patient rights**
- **Accurate and updated information on health, disease and treatment**
  - **E.g. medical handbook**
- **Personal home care/hospital solutions**
  - **E.g. diabetes and anticoagulant therapy**
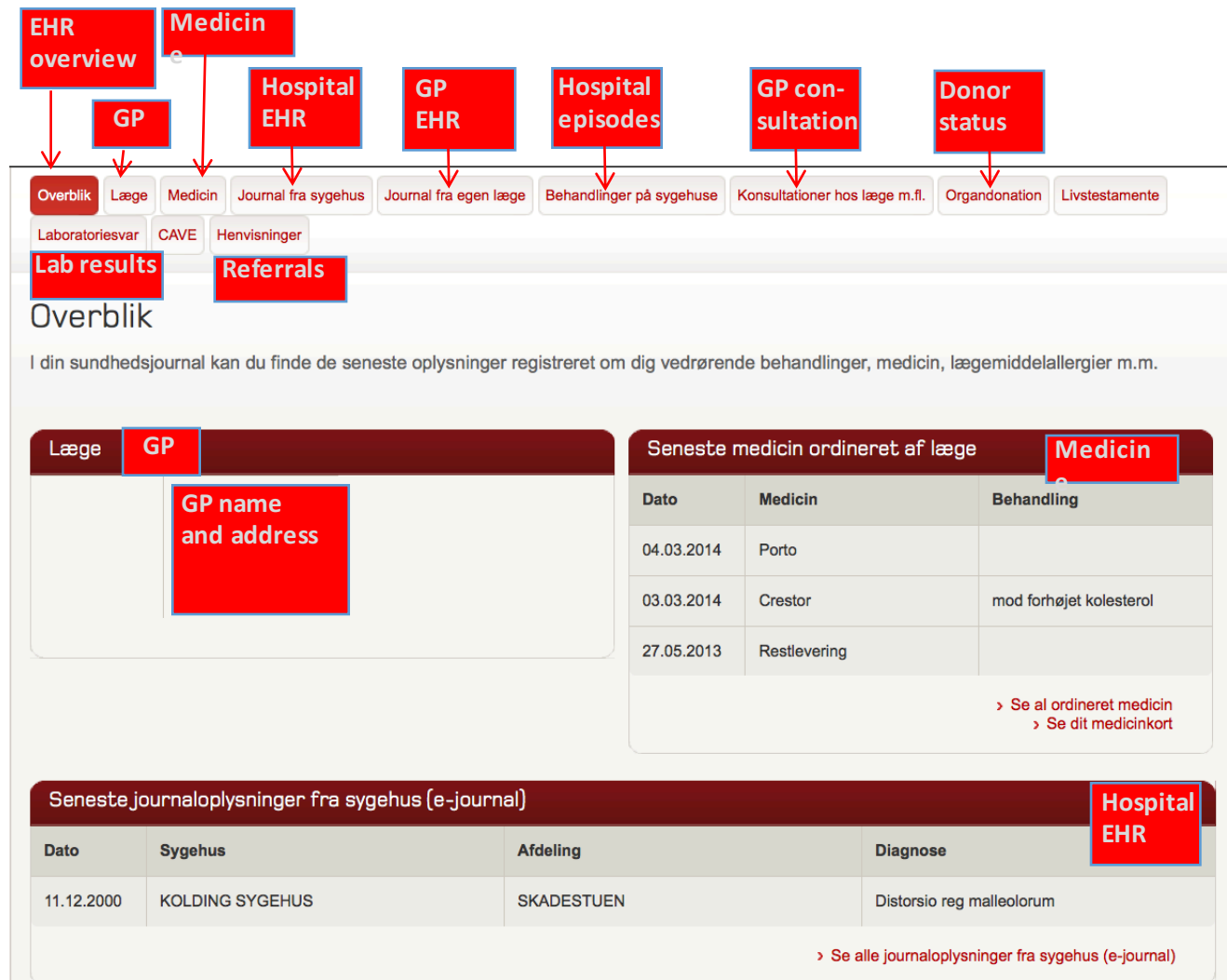- **Patient to patient dialogue**

SERVICES FOR HEALTH CARE PROFESSIONALS

- **Access to personal health data on patients**
  - **E.g. e-Record, laboratory data and Shared Medication Card**

- **Contact and service information on other health care providers**

- **General information on health service**
  - **E.g. waiting lists, quality in health care, health and prevention programs, visitation**

- **Accurate and updated information on health, disease and treatment**
  - **E.g. medical handbook, treatment feedback and benchmarking**

- **Personal home care/hospital solutions**
  - **E.g. diabetes and anticoagulant therapy**

The national EHR today (e-journal)

Labels (left screen):
- EHR overview
- Medicine
- GP
- Hospital EHR
- GP EHR
- Hospital episodes
- GP con-sultation
- Donor status
- Lab results
- Referrals
- Medicine
- GP
- GP name and address
- Hospital EHR

Navigation tabs: Overblik | Læge | Medicin | Journal fra sygehus | Journal fra egen læge | Behandlinger på sygehuse | Konsultationer hos læge m.fl. | Organdonation | Livstestamente
Laboratoriesvar | CAVE | Henvisninger

Overblik

I din sundhedsjournal kan du finde de seneste oplysninger registreret om dig vedrørende behandlinger, medicin, lægemiddelallergier m.m.

Læge

Seneste medicin ordineret af læge

Dato	Medicin	Behandling
04.03.2014	Porto	
03.03.2014	Crestor	mod forhøjet kolesterol
27.05.2013	Restlevering	

› Se al ordineret medicin
› Se dit medicinkort

Seneste journaloplysninger fra sygehus (e-journal)

Dato	Sygehus	Afdeling	Diagnose
11.12.2000	KOLDING SYGEHUS	SKADESTUEN	Distorsio reg malleolorum

› Se alle journaloplysninger fra sygehus (e-journal)

Seneste journaloplysninger fra læger (p-journal)

Dato	Hos	Speciale	Fagligt område
20.06.2011		Alment praktiserende læge	HOVEDOVERSIGT

› Se alle journaloplysninger fra egen læge og speciallæger (p-journal)

Labels (right screen): GP EHR, GP name, Specialists, Hospital episodes

Behandlinger på sygehus

Se oplysninger om:
- Behandlinger på sygehus efter 1977
- Ambulant behandling og skadestuebesøg efter 1995

› Se oversigt over behandlinger på sygehuse

Konsultationer hos læge, tandlæge, fysioterape...

Se de behandlinger, du har fået tilskud til fra sygesikringen. På oversigten kan du se:
- Hvornår du sidst var hos tandlæge, fysioterapeut o.lign.
- Hvor meget tilskud, du har fået fra sygesikringen

› Se behandlinger hos læge, tandlæge, fysioterapeut m.fl.

Data for the National E-health platform is delivered by the regional E-health solutions – e.g. the Systematic eHealth platform

Columna is a full blown eHealth platform consisting of

- The Patient Record

- Patient Administration (ADT)

- Booking

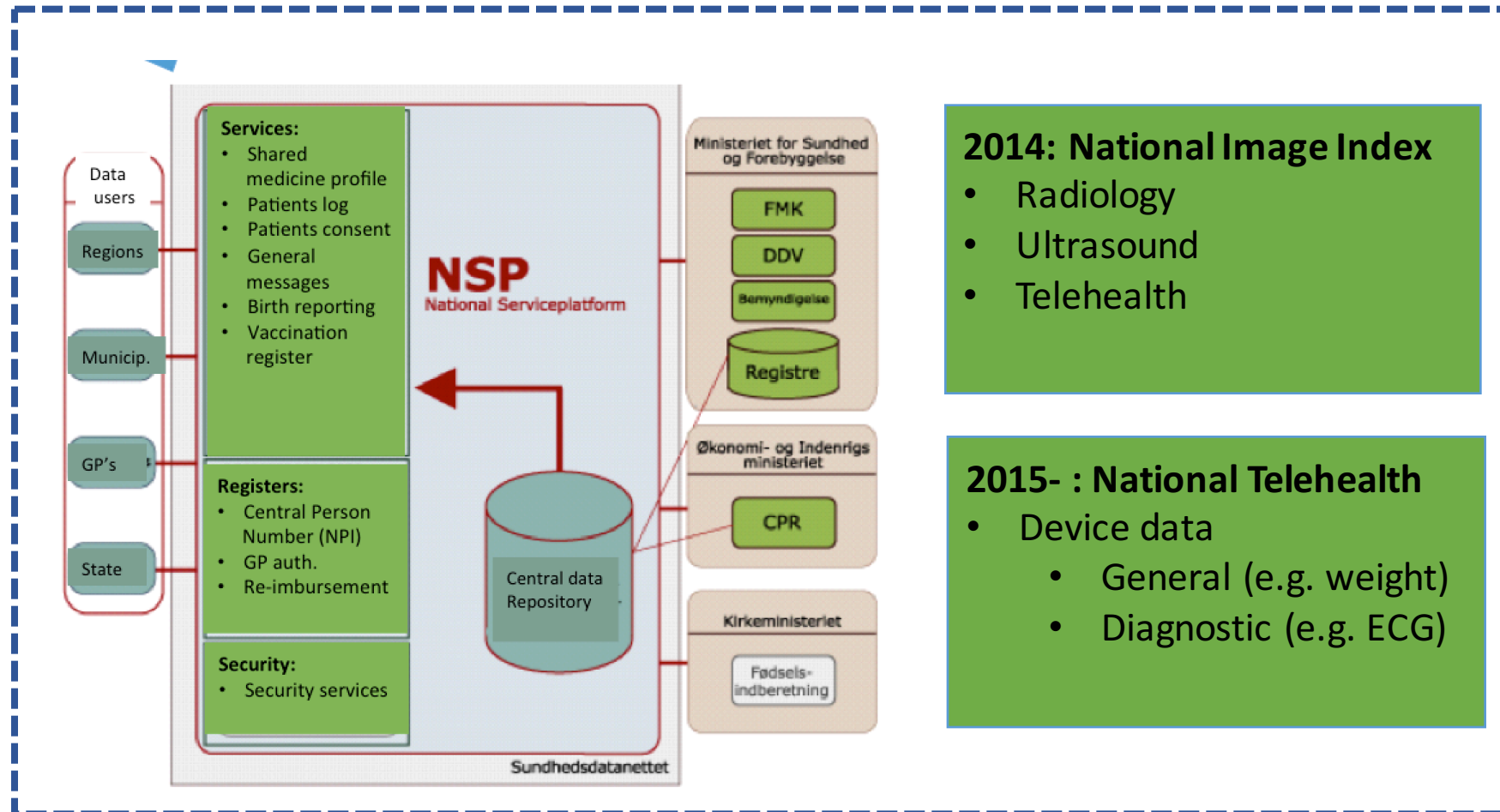- Order/Result

- Medication Management

- Logistics

With Columna, Systematic has developed an integrated eHealth platform

Facts about Columna

✓ Columna is used in Central Denmark Region (Denmark's second largest region with 1.3 million citizens) covering 18 hospitals including University Hospitals

✓ 10,000 different users per day, 25,000 registred users

✓ 6.7 million citizens are registered in Columna, of whom 1.2 million are patients with registered data.

✓ Registration of 2,400 admitted patients and 5,500 outpatients per day.

✓ More than 25,000 medication prescriptions per day.
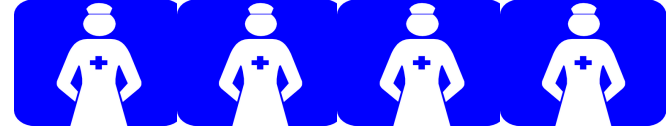
✓ 40,000 lab results per day. 6,500 per hour in peak.

Healthcare DENMARK

SYSTEMATIC

The National Service Platform – and new services

2014: National Image Index
- Radiology
- Ultrasound
- Telehealth

2015- : National Telehealth
- Device data
    - General (e.g. weight)
    - Diagnostic (e.g. ECG)
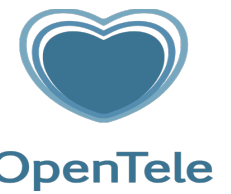
Government National Databases

FÆLLES MEDICINKORT

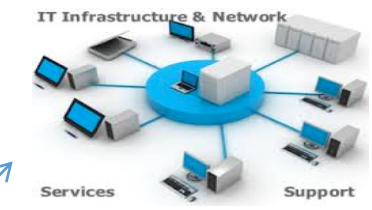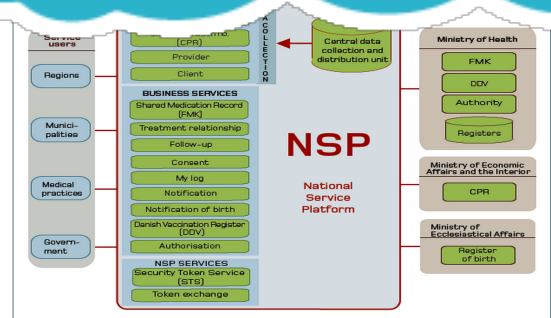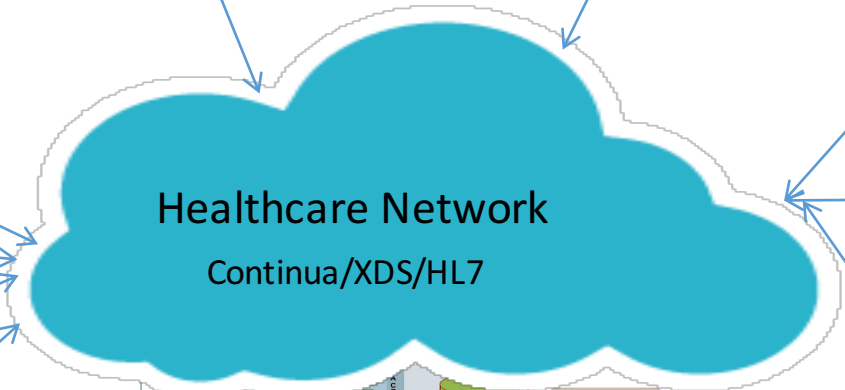National Healthportal

Municipal IT

X 98

5 Regions

IT Infrastructure & Network

Services   Support

OpenTele

EU systems

Healthcare Network

Continua/XDS/HL7

NSP
National Service Platform
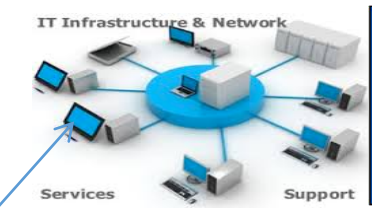
NSP Master

3600 GP's

The Shared Medication Record app

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