

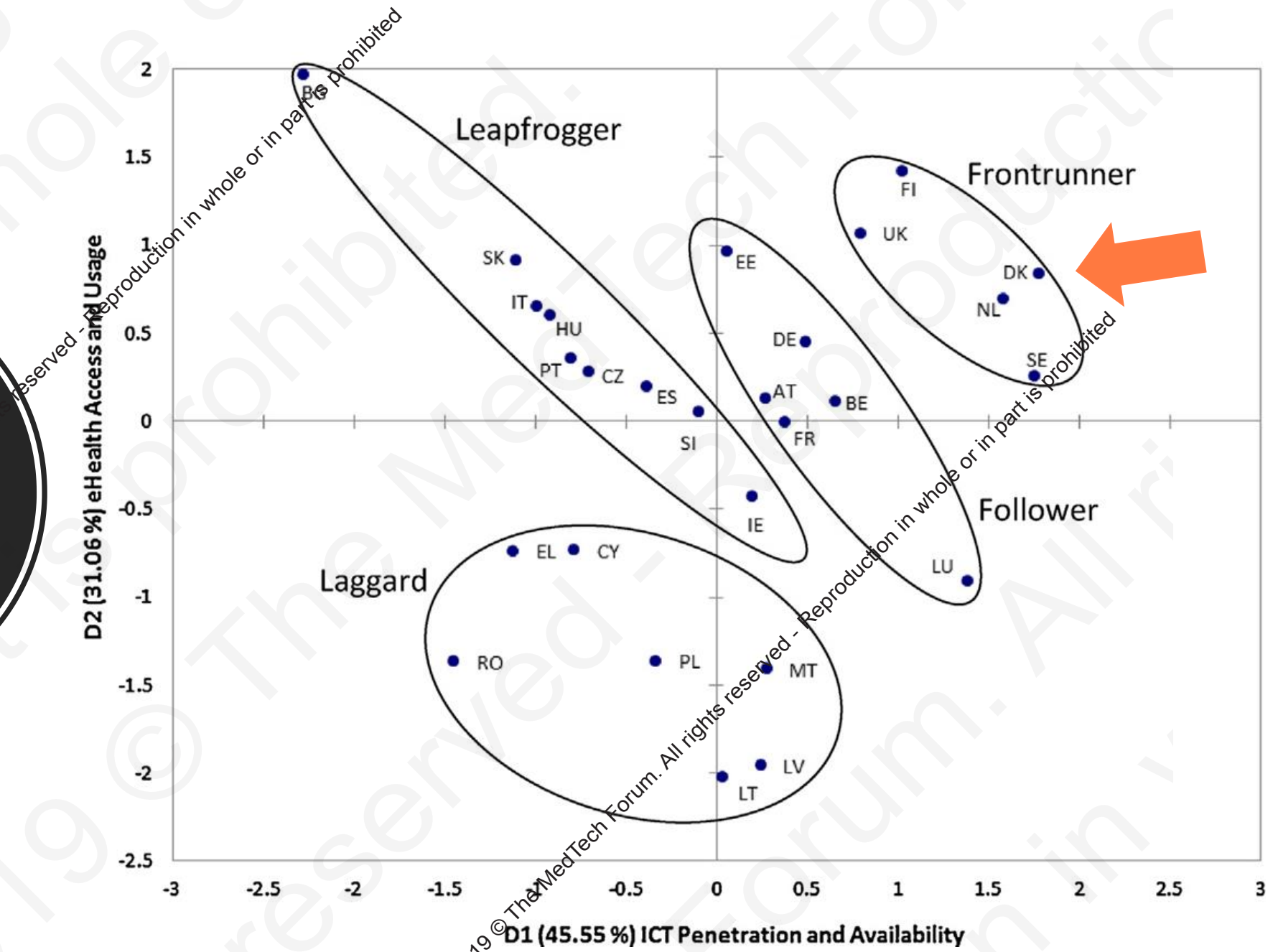
# National tender and implementation of telemedicine cross Denmark

How political visions and joint leadership influences the vendor market insisting on open standards and interfaces

Mette Harbo, CIO Department of Health – Copenhagen Municipality

MedTech Forum – Paris, May 16<sup>th</sup> 2019

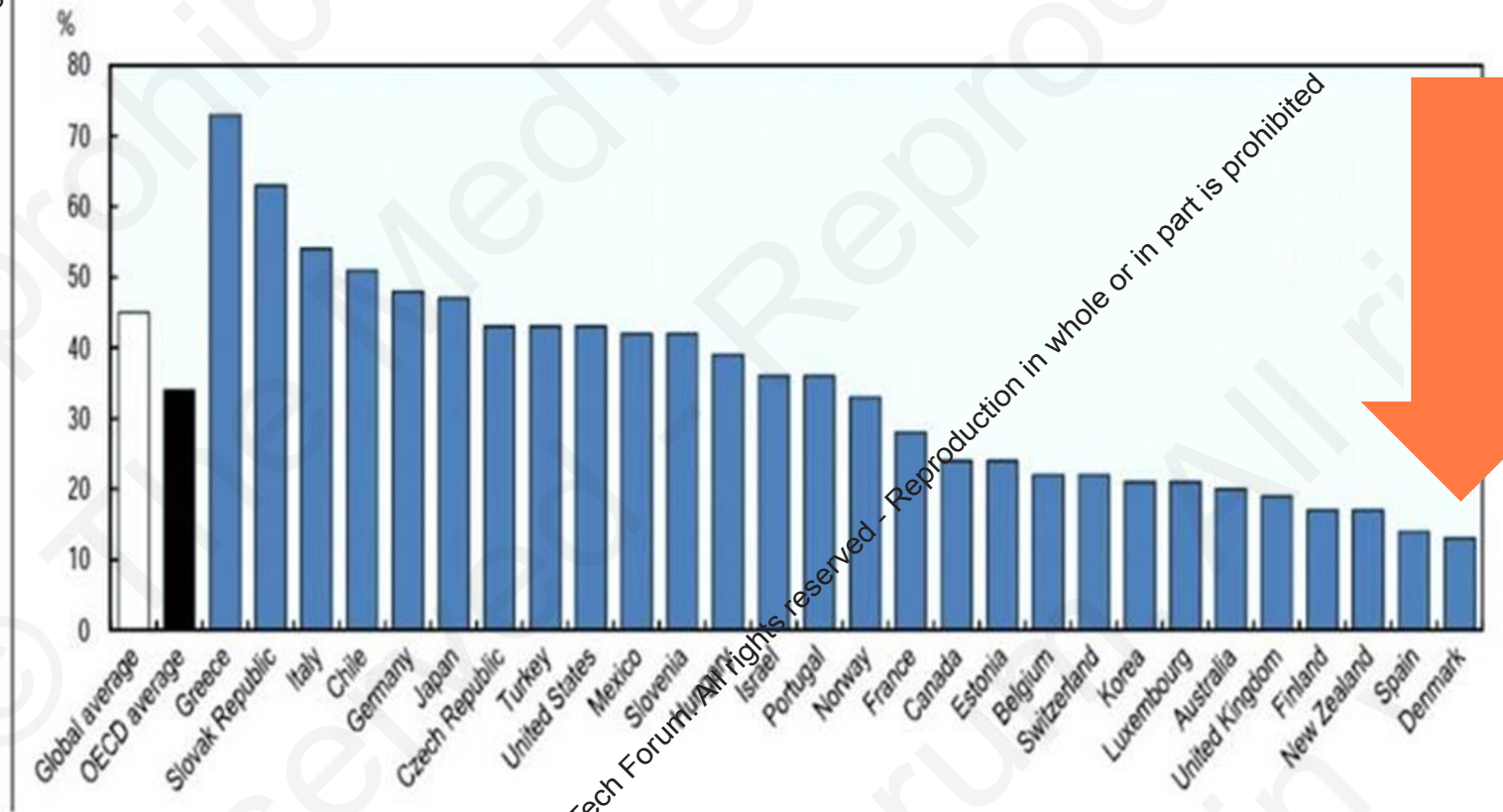
Denmark as an e-health frontrunner..



# High level of trust in e-health data in Denmark

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A third of OECD citizens believe the health sector is corrupt or very corrupt



# ORGANIZATION OF THE DANISH HEALTH CARE SYSTEM

## NATIONAL LEVEL

Ministry of Health



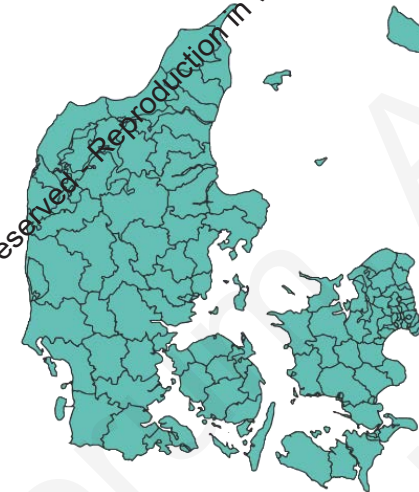
## REGIONAL LEVEL

Five Regions



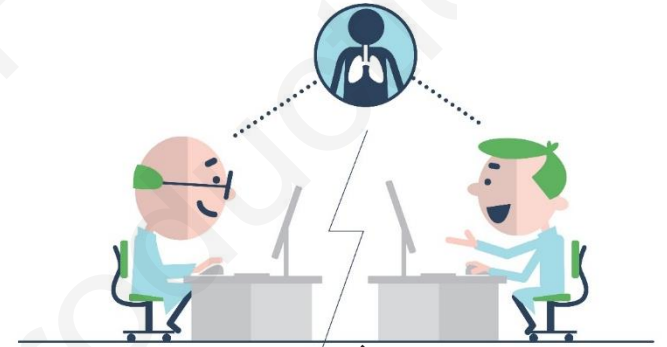
## LOCAL LEVEL

98 Municipalities



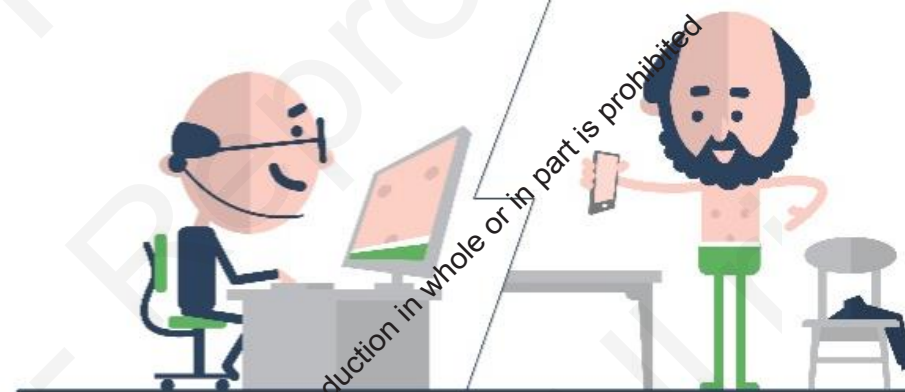
# BACKGROUND: TELEMEDICINE IN DENMARK

- Demographics and chronic diseases
- Decade with pilots
- National architecture – reference framework
- Financial agreement on nationwide telemedicine for COPD patients



# NATIONAL TENDER ON TELEMEDICINE

- One organization – on behalf of 98 municipalities and 5 regions
- Small board – extensive mandate
- Two related tenders:
  - 1) Infrastructure for telemedicine
  - 2) IT solutions for patients and employees



# VISION & STRATEGY

## SHORT TERM

- The technical and organizational foundation
- Starting with COPD
- Multi-vendor strategy
- Better use of data across sectors

## LONG TERM

- Integration of other telemedicine disease areas on the generic infrastructure
- Short time-to-market
- Better use of data
- Exploiting knowledge in the supplier market



# KEY PRINCIPLES

for infrastructure and IT solutions

- High degree of flexibility
- Sharing data across sectors and involvement of patients
- High degree of automation
- Light user interfaces and “heavy” infrastructure
- Supports BYOD
- National infrastructure components are first choice
- Based on standards and interfaces
- No proprietary



# STANDARDS AND REFERENCE ARCHITECTURE

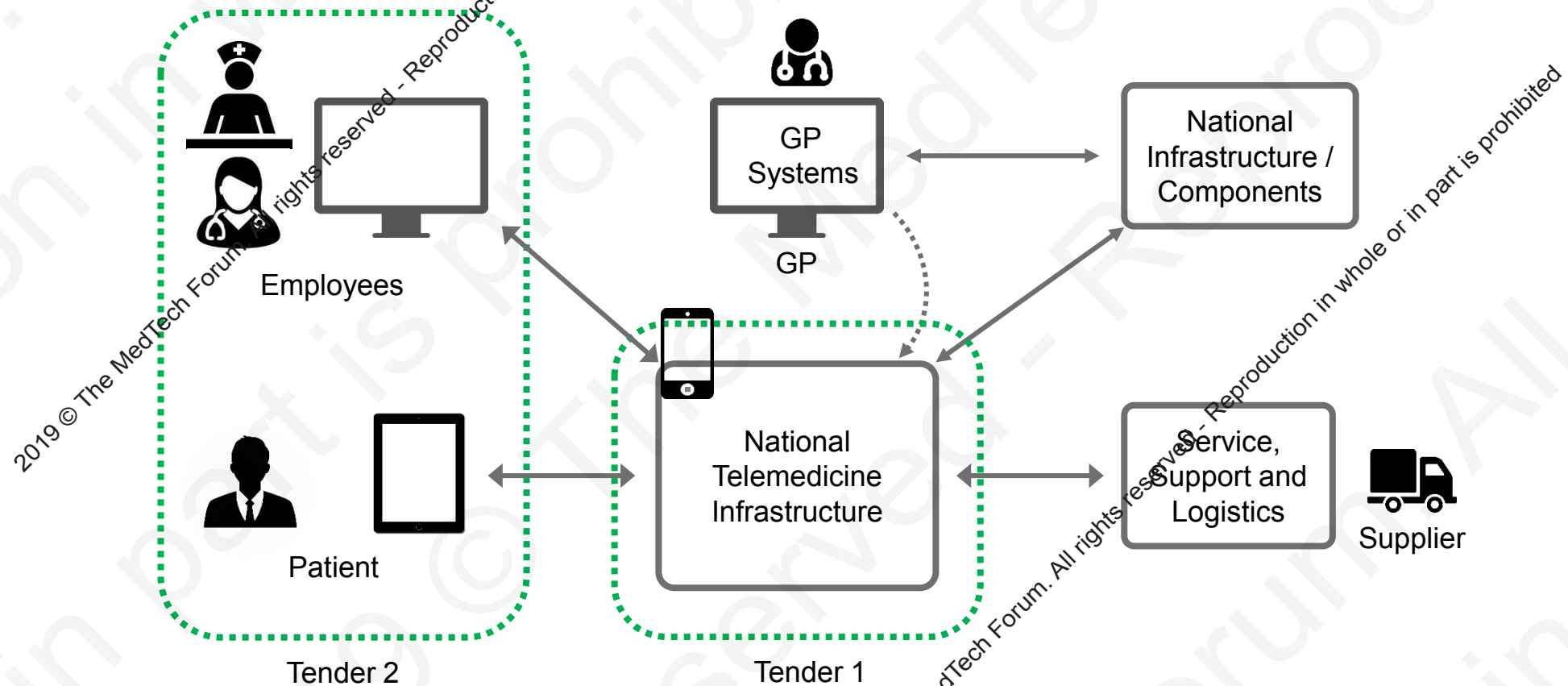
## Is built on national reference architecture

- Reference architecture for IT security
- Reference architecture for collecting health data from citizens
- Reference architecture for sharing documents and images
- Reference architecture for user management

## Primary standards

- National standards/specifications
- FHIR
- HL7
- Continua (in patient/employee solutions)

# INFRASTRUCTURE AND IT SOLUTIONS FOR TELEMEDICINE



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# NOT JUST TECHNOLOGY!

- Cooperation and organization  
- new ways
- Few people with a extensive mandate on behalf of the majority — is that operational?
- Communication and stakeholder management



# BARRIERS AND BUMPS ON THE ROAD

- Ambition vs. risk
- Cloud vs. GDPR
- Market shares and price transparency

