

## Danish FHIR – How legacy gets FHIR'ed

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## Who am I?

- Michael Johansen
- COO MedCom



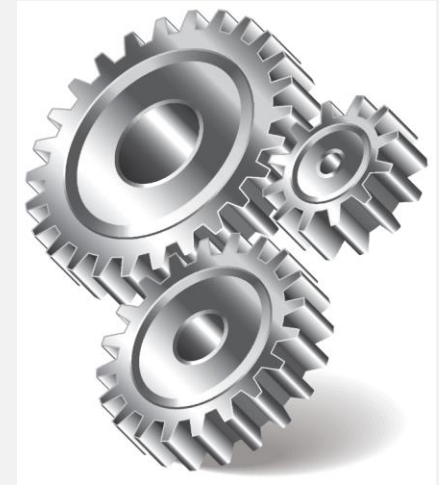
# Danish legacy – and need for modernization

- **Standards** for Semantic Interoperability

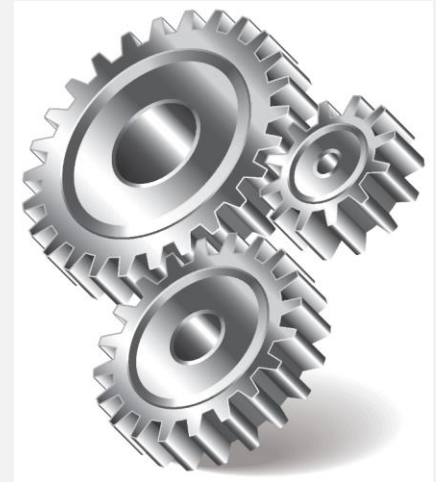
- Messaging with EDifact (1994) Prescriptions (Pilot 1990)
- Webservices with XML (2005)
- Document sharing with CDA (2014)

- **Modernization**

- Messaging with FHIR (2022)
- RESTful API with FHIR (2023)
- Document sharing with FHIR (2024)



# Danish legacy – and need for modernization



- **Infrastructure**

- VANS Network (1994) for Messaging.
  - Free choice of 3 approved private VANS-operators
- Healthdata backbone Network (2005) for webservices and websites
- IHE XDS (2014)
- Download Classifications from websites

- **Modernization**

- EHMI with eDelivery+ (2023-2025) messaging become XDS repository
- FHIR Terminology-server

# Danish legacy – and need for modernization

- **ISO9001 processes**
  - for QMS Test/Certification (2015)
  - for develop/maintain Standards (2020)
  
- Touchstone used for test
  - Self-assessment for Vendors
  - Certification as supplement

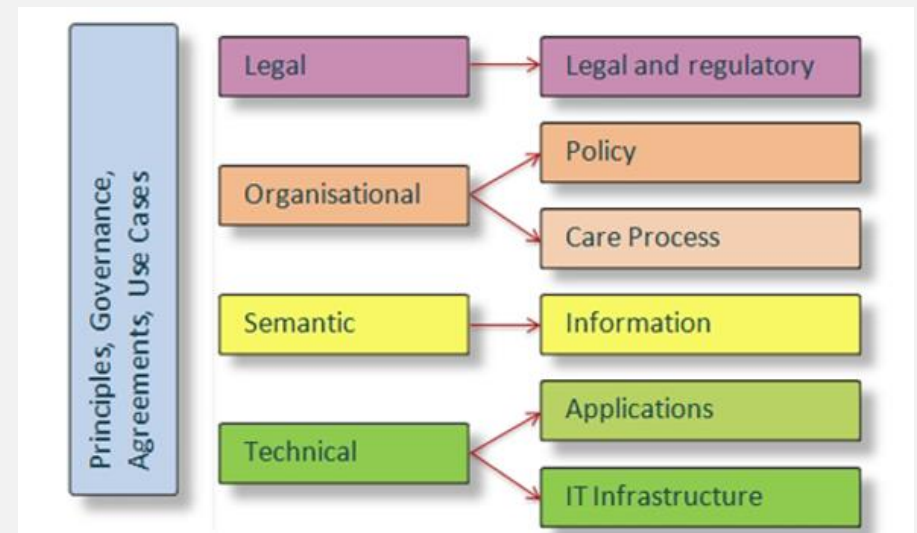
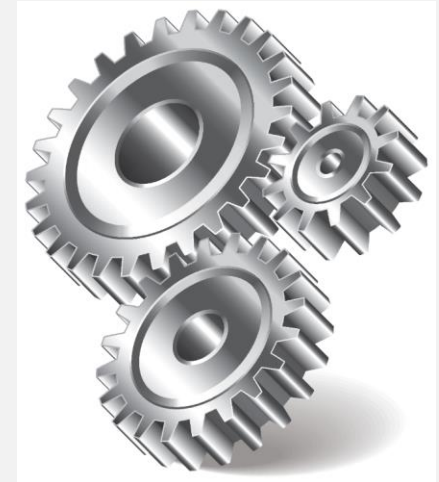


Figure 1: Refined eHealth European Interoperability Framework

# Standard Catalog

- Referrals and discharge Letters (Hospitals, Municipalities, Primary care)
  - Rehabilitation plan
- Laboratory Orders and Reports, Analysis Catalog
- Reimbursement
- Hospital Notification, Report of admission/discharge, End of treatment, Progress of care, Birth Notification
- Exchange of PDF and Pictures (with reference to other Message)
- Care Communication (Clinical E-mail)
- EHR exchange format GP (FNUX), Hospitals (SUP), Municipalities (FSIII)

# Standard Catalog – Channel Strategy autumn 2023

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  - ~~Exchange of PDF and Pictures (with reference to other Message)~~
  - Care Communication (Clinical E-mail)
  - EHR exchangeformat GP (FNUX), Hospitals (SUP), Municipalities (FSIII)
- Messaging
  - RESTful API
  - Both

# Complications

- Loose Coupling between Standards and Infrastructure is good
- Not only a technical upgrade to FHIR.
  - Whats in it for the Clinicians?
  - Start with the messagetypes where there is a clinical need for modification
  - Start with the messagetypes that best fit the message paradigm
    - Transfer of responsibility for the patient



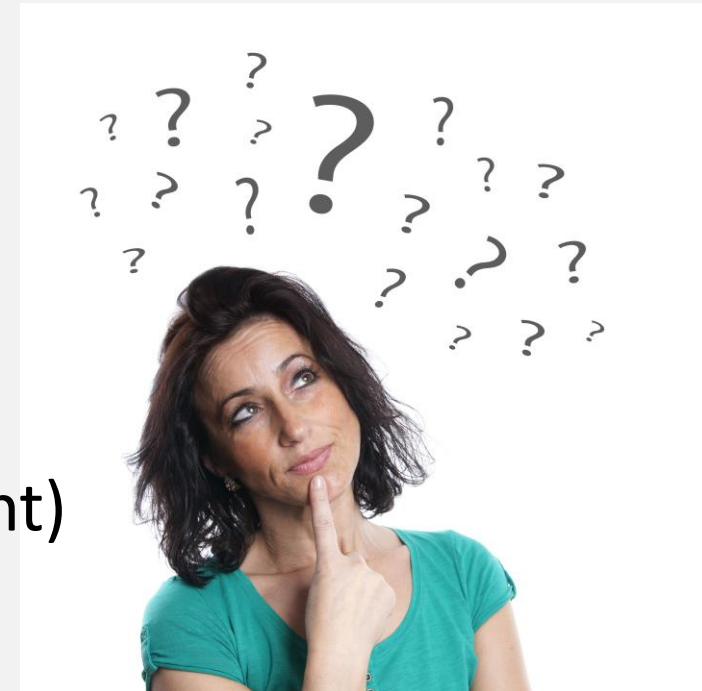


# Complications

- Reconsider datashare paradigm
- Can have huge implications for existing national healtdata ecosystem
  - Many entangled Systems, Apps and Citizens/Patients Portals
- Example (legacy)
  - National Referral Repository "DNHF" (two messageflows)
  - Referrals for free choice of Provider
    - Private Specialist, Psychologist, Physiotherapy, Podiatrist
  - Referrals for Hospitals
  - "DNHF" is datasource for the Citizens Apps/Portals overview of Referrals

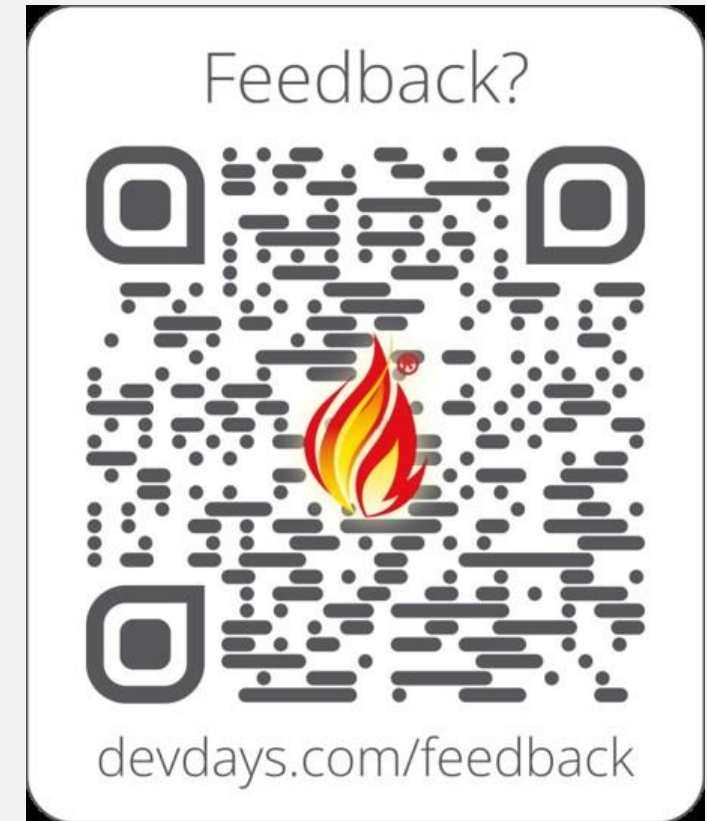
# Sustainable modernization

- FHIR is more expensive than expected
  - Vendors+ recommend FHIR
  - Costs are
    - FHIR knowledge
    - FHIR messaging paradigm
    - New functionality
- Don't add extra nice-to-have functionality
- Have a close dialogue with Vendors (early involvement)



## Contact

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## Q&A

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