Compliant, data-driven city of Trondheim: Public data sharing, its current challenges and future prospects
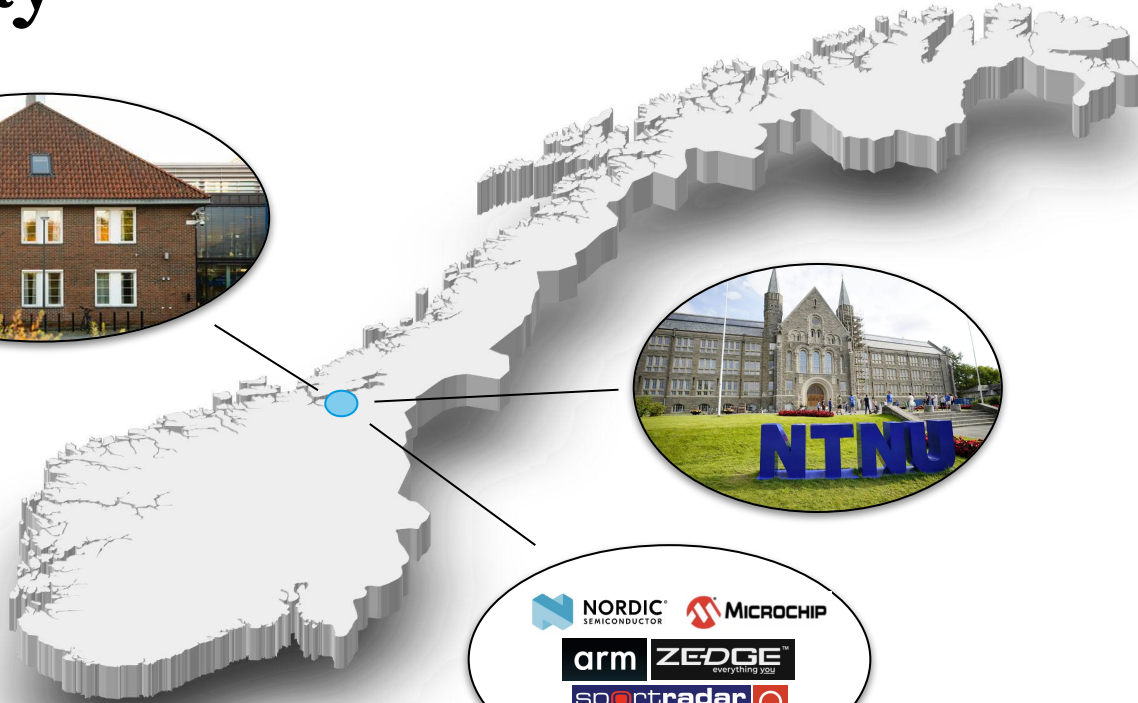
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Outline

- About the municipality of Trondheim
- Challenges related to data management and data sharing
- Future prospects

Trondheim - the technology capital of Norway

The municipality of Trondheim

15.000 employees delivering

200+ mandatory services to our

215.000 citizens

Credit: Mostphotos

The municipality of Trondheim

8 city council areas, 19 service areas, 200+ units and hundreds of IT-systems generating and holding data

Health and care	Social services	Education	City development	Finance	Environment, business and mobility	Culture, sports and outdoor activities	City councilor´s department
Nursing homes and assisted living facilities	Habilitation and administration	School	Municipal engineering	Trondheim property	Procurement service	Trondheim public library	Administration and management support
			City maintenance services	Ownership unit	Climate and environment unit	Culture unit	Legal services
Homebased services	Child and family services	Kindergartens	Building permits office	Accounting services	Mobility and transportation unit	Sports and outdoor activities unit	Public safety and emergency preparedness
			Maps and architecture unit	Economy services	Business and societal development unit	Trondheim culture school	Communication unit
Medical services	Mental health, work and inclusion	Coping and inclusion	City planning office	HR unit	Trondheim parking		Employment services
				Trondheim DIGITAL			
Units	Units	Units		Occupational health service			

Challenge: Bring the "data house in order"

Data Fabric Design

Trondheim DIGITAL

Health and care

Social services

City Development

Culture, sports and outdoor activities

City councilor's department

Education

Finance

Environment, business and mobility

City council area · Municipal Manager area · Unit

Challenge: Bring the "data house in order"

- **Data knowledge strong, but distributed and contained within the different areas**

- **A federated architecture for data management**

- **"Brick by brick" - full-scale implementation impossible**

- **Interoperability is challenging…**

Challenge: lack of standardised (meta)data representation

Collaboration with the Municipality of Delft on a municipal data model

Delfts Gemeentelijk Gegevensmodel
- «Informatiemodel» Delft Municipal Data Model
  - «Domein» 0 Governance, Politics and Support
  - «Domein» 1 Safety and Permits
  - «Domein» 2 Traffic, Transport and Water Management
  - «Domein» 3 Economy
  - «Domein» 4 Education
  - «Domein» 5 Sports, culture and recreation
  - «Domein» 6 Social domain
  - «Domein» 7 Public Health and Environment
  - «Domein» 8 Public Housing, Living Environment and Urban Renewal
  - «Domein» 9 Internal Organization
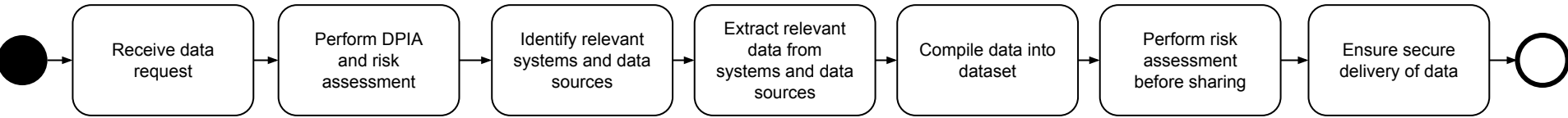 - «Domein» 10 Services
  - «Domein» 99 Core

Challenge (and opportunity): Sharing public data by law
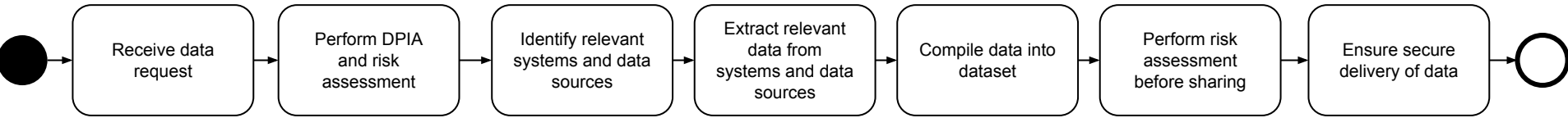
- Two new laws based on the Open Data Directive, HVD Implementing Regulation and the Data Governance Act
    - "Law on data sharing" (open data)
    - "Law on data governance" (protected data)
- Public hearing autumn 2024

NOU Norges offentlige utredninger 2024: 14

Med lov skal data deles

Ny lovgivning om viderebruk av offentlige data

Challenge: inefficient routines for handling data sharing requests

Receive data request → Perform DPIA and risk assessment → Identify relevant systems and data sources → Extract relevant data from systems and data sources → Compile data into dataset → Perform risk assessment before sharing → Ensure secure delivery of data

Challenge: inefficient routines for handling data sharing requests

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● → [Receive data request] → [Perform DPIA and risk assessment] → [Identify relevant systems and data sources] → [Extract relevant data from systems and data sources] → [Compile data into dataset] → [Perform risk assessment before sharing] → [Ensure secure delivery of data] → ○
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- "Single window" for data sharing requests
- Expertise on DPIA and risk assessment exists, but they are scarce resources
- General lack of standardised data representation and semantic descriptions of data
- Should automate data protection processes
- Currently miss a good secure platform for sandbox-testing and secure data sharing

Future prospect: a data-driven city

Goal: Make better decisions, work more efficiently, and get more value from our investments!



Specific Problem

Defined Action

Clear Data Product

Accessible Data

NESTA (Offices of data analytics) Public Sector Data Analytics in Four Steps

Future prospect: Strengthen research collaboration through data sharing

- In general a high sick leave percentage in the municipality
- Some units closer to 20 %
- Ambition: Reduce the sick leave percentage by 1 % every year the next four years
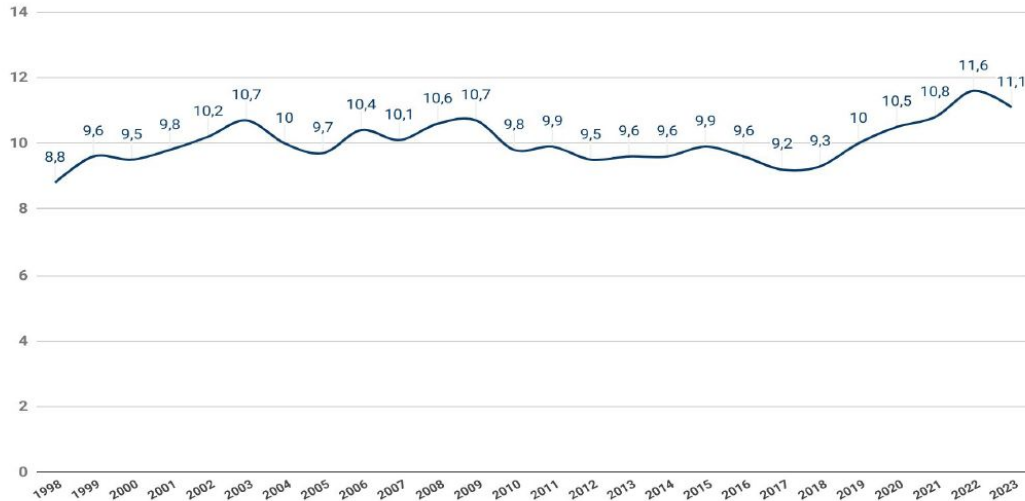
Sick leave percentages in the municipality of Trondheim

Case in DataPact: Sick leave data

- Includes PII
- Combination of multiple data sources
- Lots of data cleansing and harmonisation needed
- DPIA and risk assessment
- Laws and ethics
- Techniques for anonymising the data
- Techniques for analysing potential re-identification
- If non-anonymised: Secure sharing +++
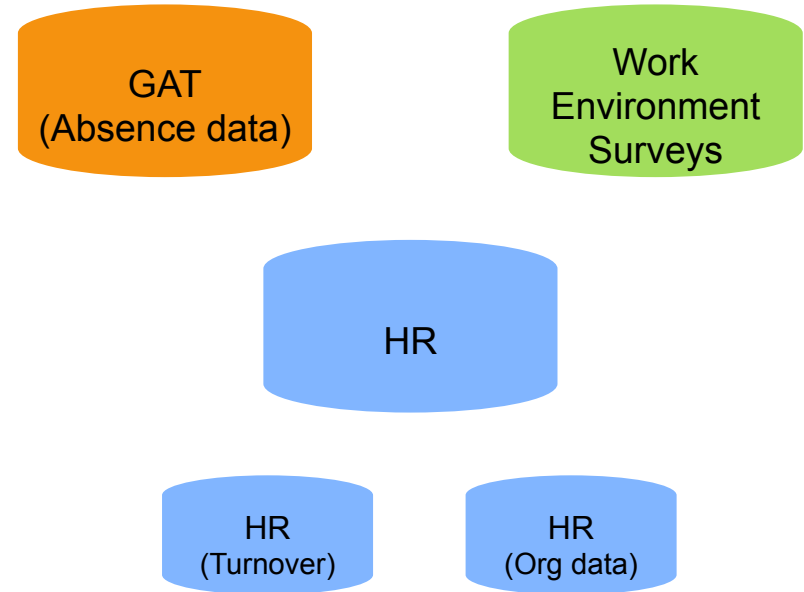
TRONDHEIM KOMMUNE
Tråanten tjïelte

Thank you.