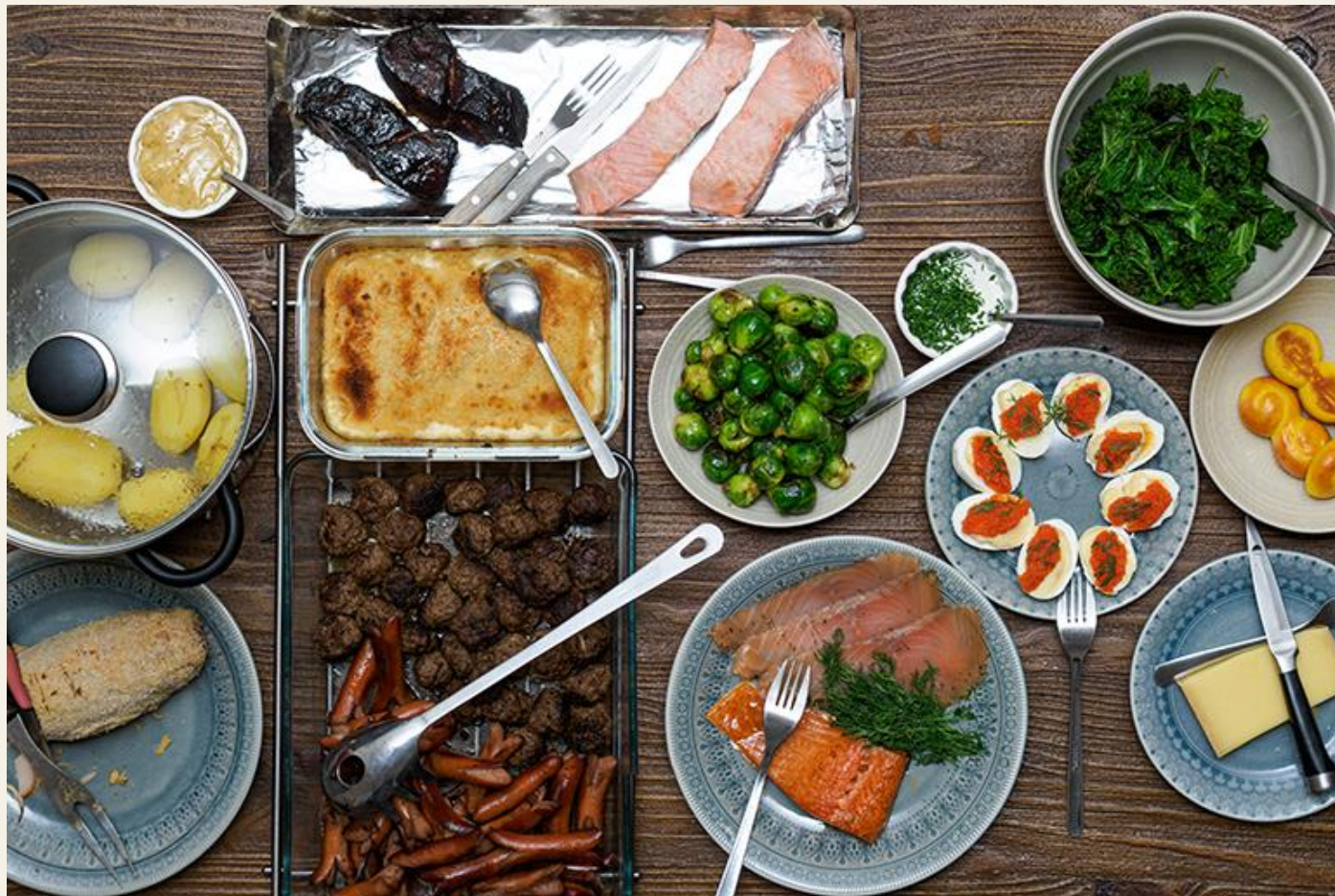


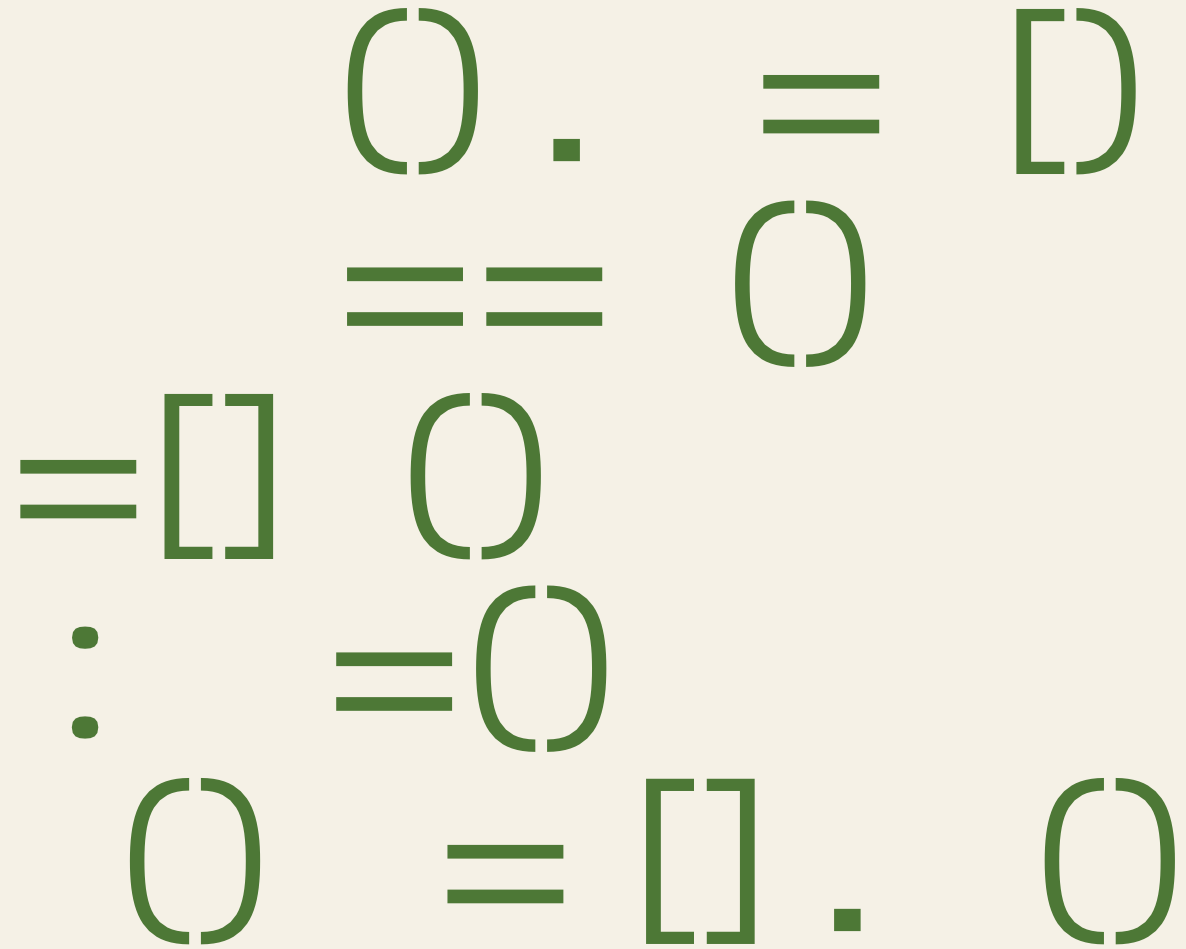
The Danish public sector  
approach to data availability –  
lessons learned from the National  
Data Portal and key tasks for the  
coming years

# Smørrebrød (smorgasbord)



# Agenda

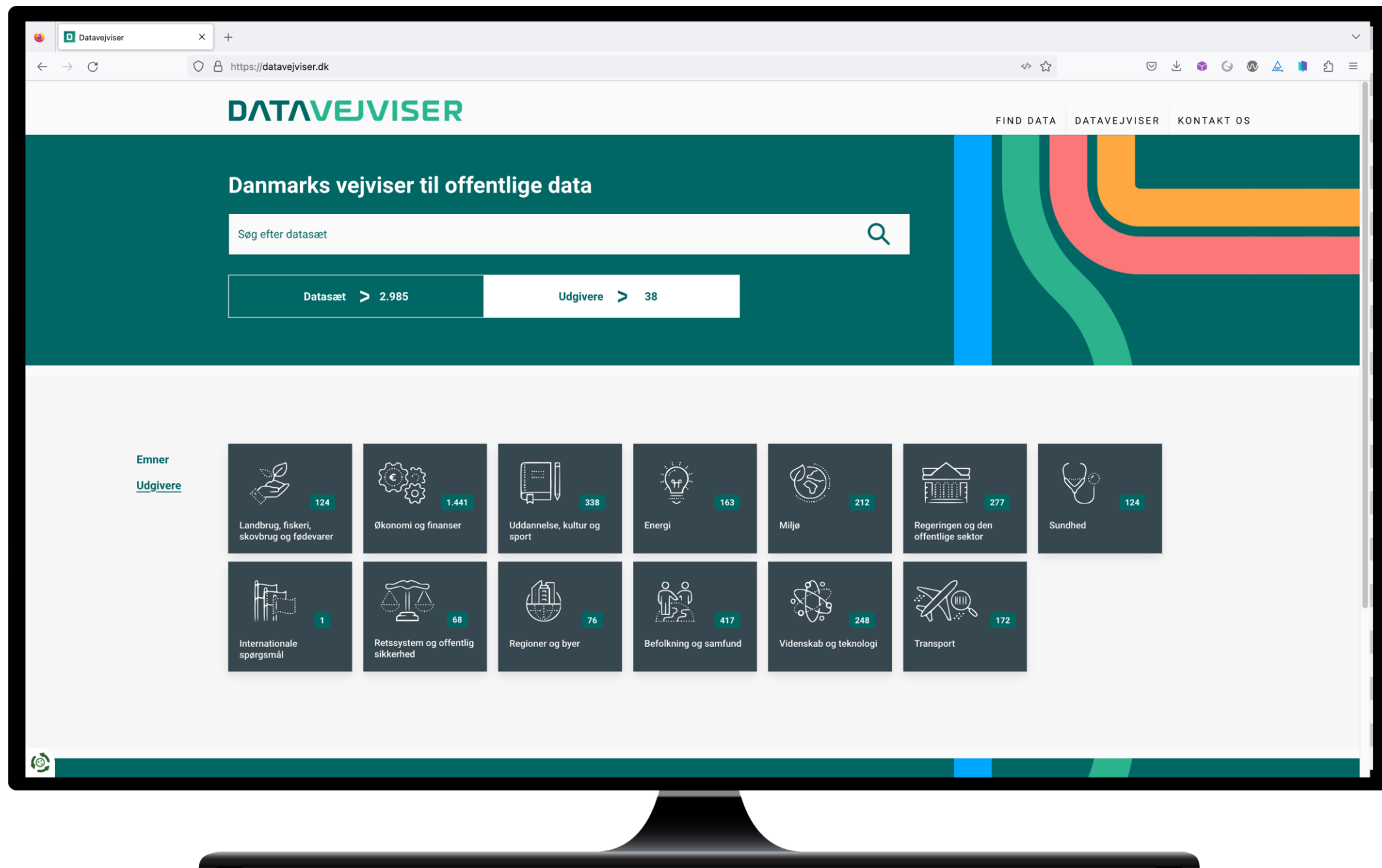
- The Danish Dataportal: What we did
- Why this approach?
- Lessons learned and our (expected) next steps
- And a workshop later for those interested



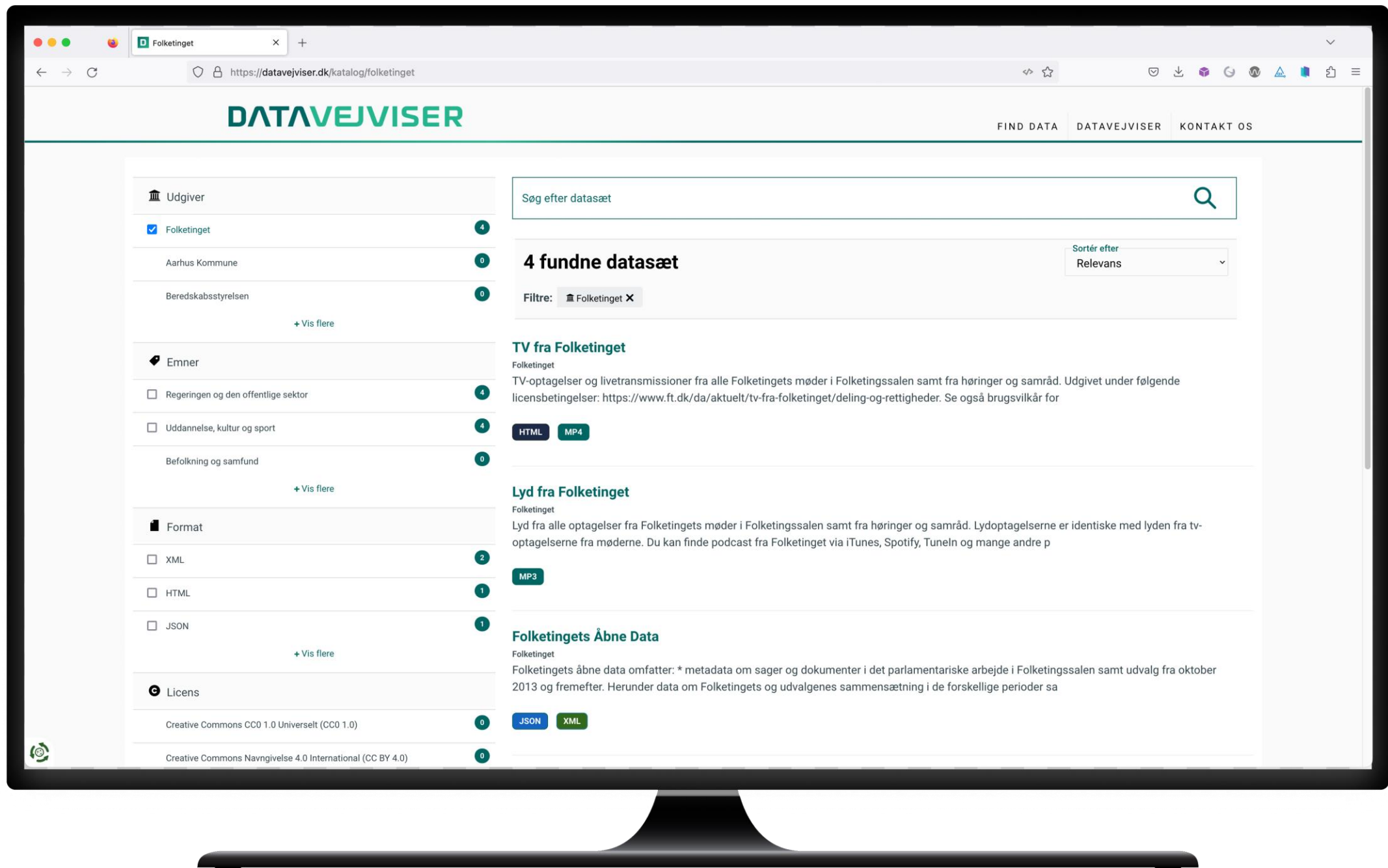
**DATA**VEJVISER

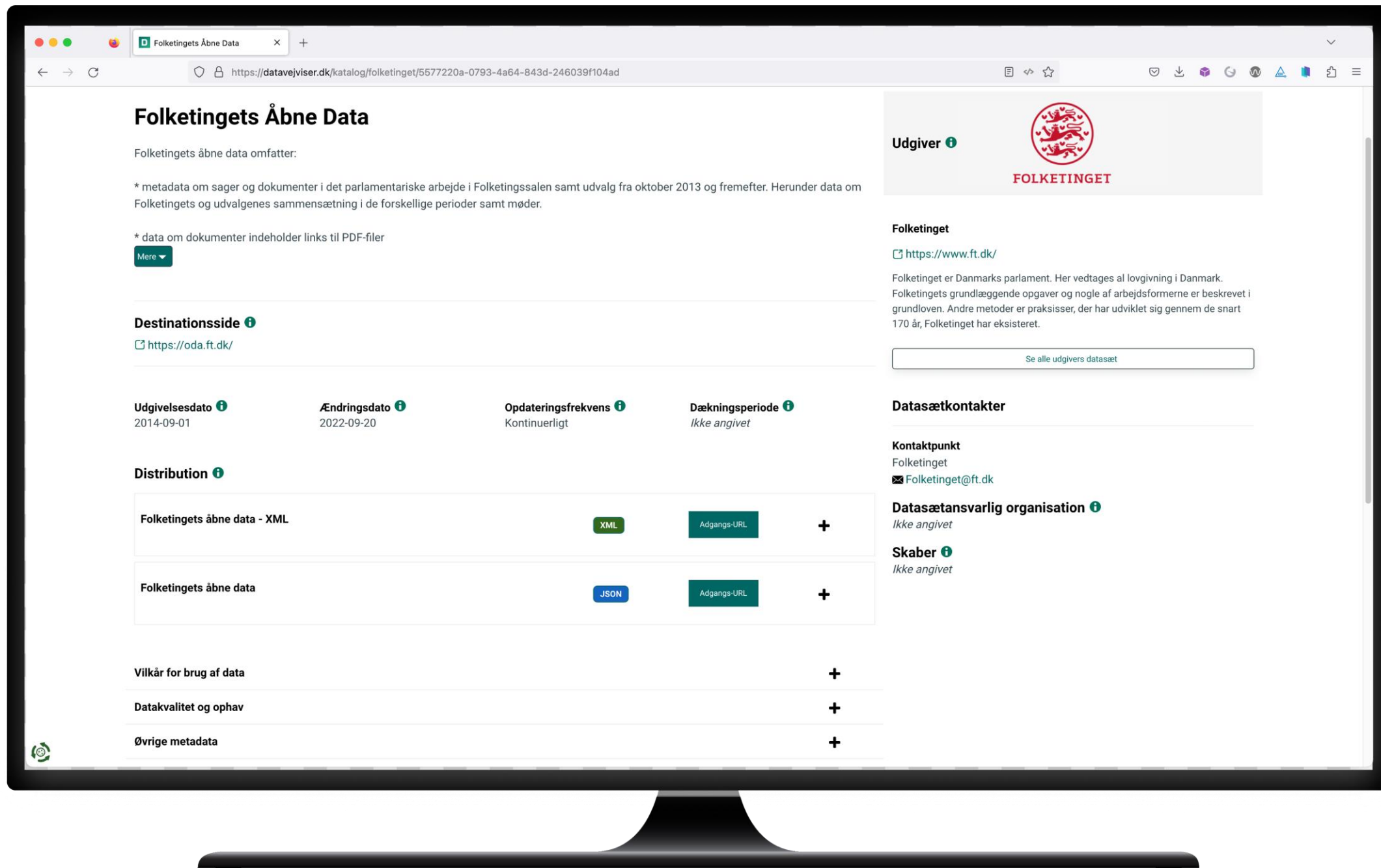
**The Danish Data  
Portal:**

**Data-vej-viser  
(Data-Weg-weiser)  
(Data Road-map)**









DANMARKS DATAVINDUE



RIGSARKIVET

geodata-info



Statistikbanken

OPEN DATA DK

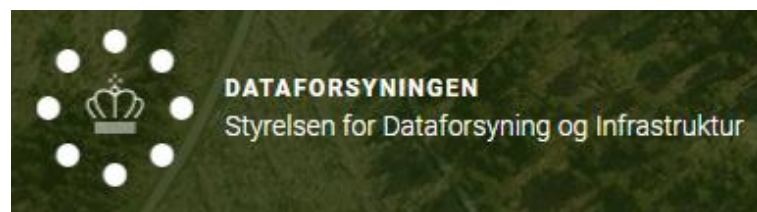
Jobindsats

Frie Data

DMI frisætter frem mod 2023 sine data om vejr, hav og klima.  
Her på siden kan du se og hente DMI's Frie Data.



Danmarks Miljøportal  
Data om miljøet i Danmark



Dataudveksleren



# DATAVEJVISER

DANMARKS DATAVINDUE



BØRNE- OG  
UNDERVISNINGSMINISTERIET  
UDDANNELSESSTATISTIK



RIGSARKIVET

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ENERGI  
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Data om miljøet i Danmark



DATAFORDELER



DATAFORSYNINGEN  
Styrelsen for Dataforsyning og Infrastruktur



Dataudveksleren

# DATAVEJVISER

DANMARKS DATAVINDUE



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Dataudveksleren

Google Dataset Search

# DATAVEJVISER

European Commission  
data.europa.eu - The

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## Moving forward together



Mobility DCAT-AP, Health DCAT-AP, dataspaces

GeoDCAT-AP, StatDCAT-AP, BRegDCAT-AP, DCAT-AP HVD

DCAT, DCAT-AP

# Why this approach?

1. Lessons learned from previous (failed) attempts
2. Lots of available and relatively high quality data was already available
3. More investments in data will happen
4. Joint it public sector architecture had a specification

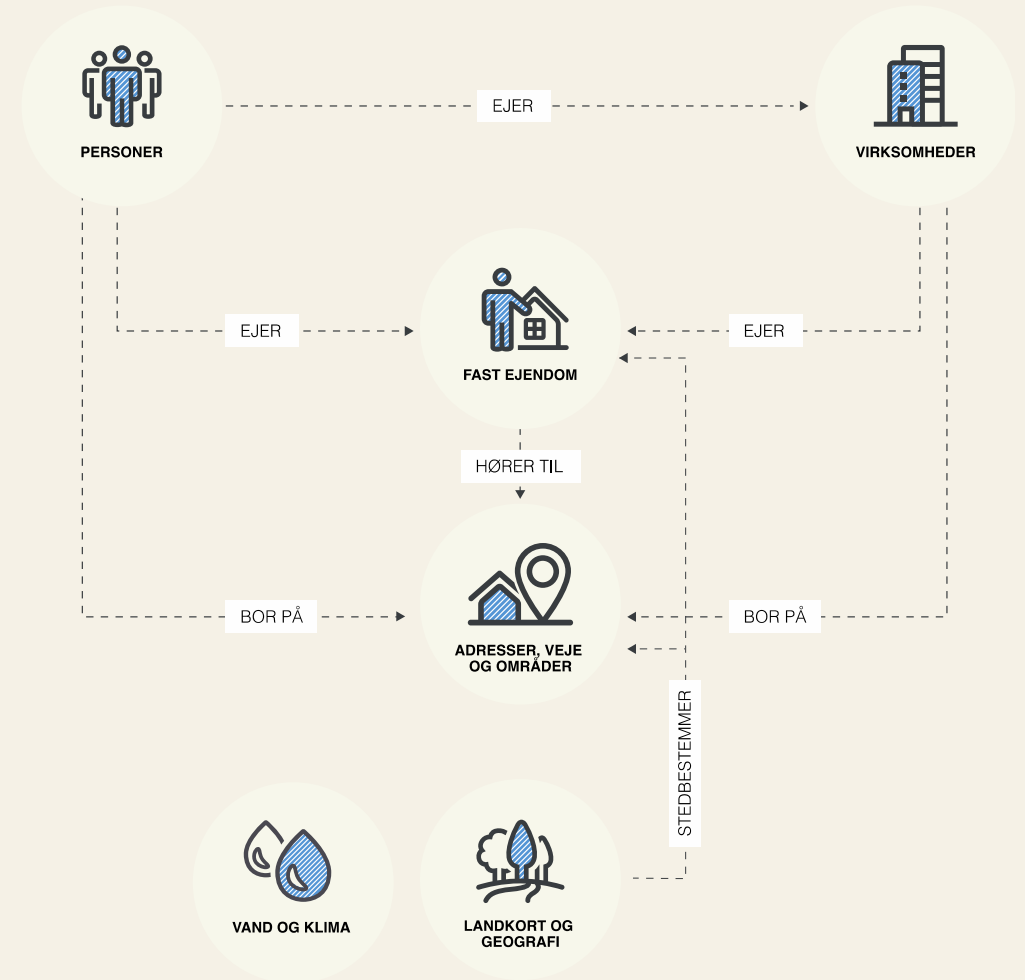
# One example of an investment

The Basic Data Programme was a cross-government effort (c. 80m € invested 2012-2019) to ensure that:

- Basis data became **standardized** so that it can be combined and applied coherently
- The **quality** of basic data was significantly increased
- Basic data is **made easily available** through the Data Distributor



atp=





# More investments happening – a selection

- Vision for better access to health data for secondary use (+ EHDS: European Health Data Space)
- Denmark's "Data Window" for research
- The Utility Digitisation Programme
- Strategic AI Initiative and its investments in opening data from National Archives, Royal Library etc. for LLM development
- Entrepreneurship Initiative for more open data
- Initiatives in the coming Joint Public Sector Digital Strategy
- The "Green Transition Deal" etc.

# Joint it public sector architecture

- DCAT-AP-DK (under revision)
- Common Language for Data Quality (under revision)
- Recommendation to use creative commons licenses (for open data)
- Catalogue of tasks done in the public sector
- Guidelines on stable http uris
- Guidelines on webservices
- ...



If time permits: 2 cases

# CASE: Beierholm working with tax authority API



Accounting and consulting firm with ~2,000 employees on 42 locations around Denmark



**Discovered API access to tax authority data using Datavejviser**

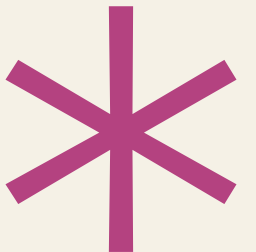
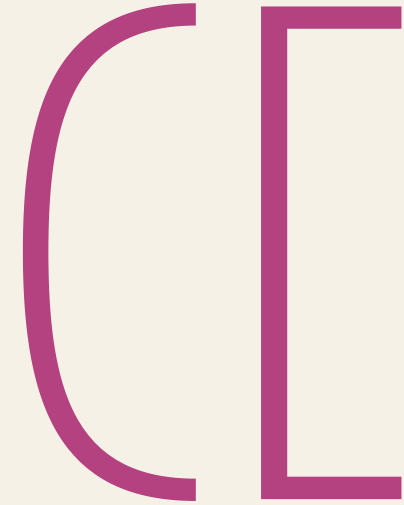
The APIs enable automated data acquisition vis-à-vis the status quo where customers' tax data used for accounting purposes were imported manually

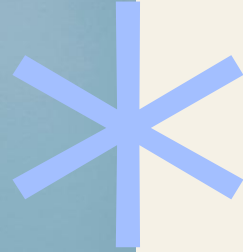


Time saved: Expected to free up 8,200 employee-hours per year when fully implemented



The data quality of the product was improved by using automatically collected rather than manually transferred data





*Christian Sørensen, consultant at the Secretariat for Employment and Welfare*

## CASE: sSyddjurs Municipality

### Solution:

Syddjurs uses data from Jobindsats [employment data], Uddannelsesstatistik [education data] and Danmarks Statistik [numerous statistics] for budgetting in the employment department.

Public data are used to follow up on the expectations implied by the budget and to benchmark themselves versus other municipalities.

### Benefits:

"We use data to make ourselves curious as to why we diverge from some municipalities on a given parameter."

"The great thing about Datavejviser is the ambition to create a single portal. (...) It has shown me that there are some statistics I had no idea existed (...)."

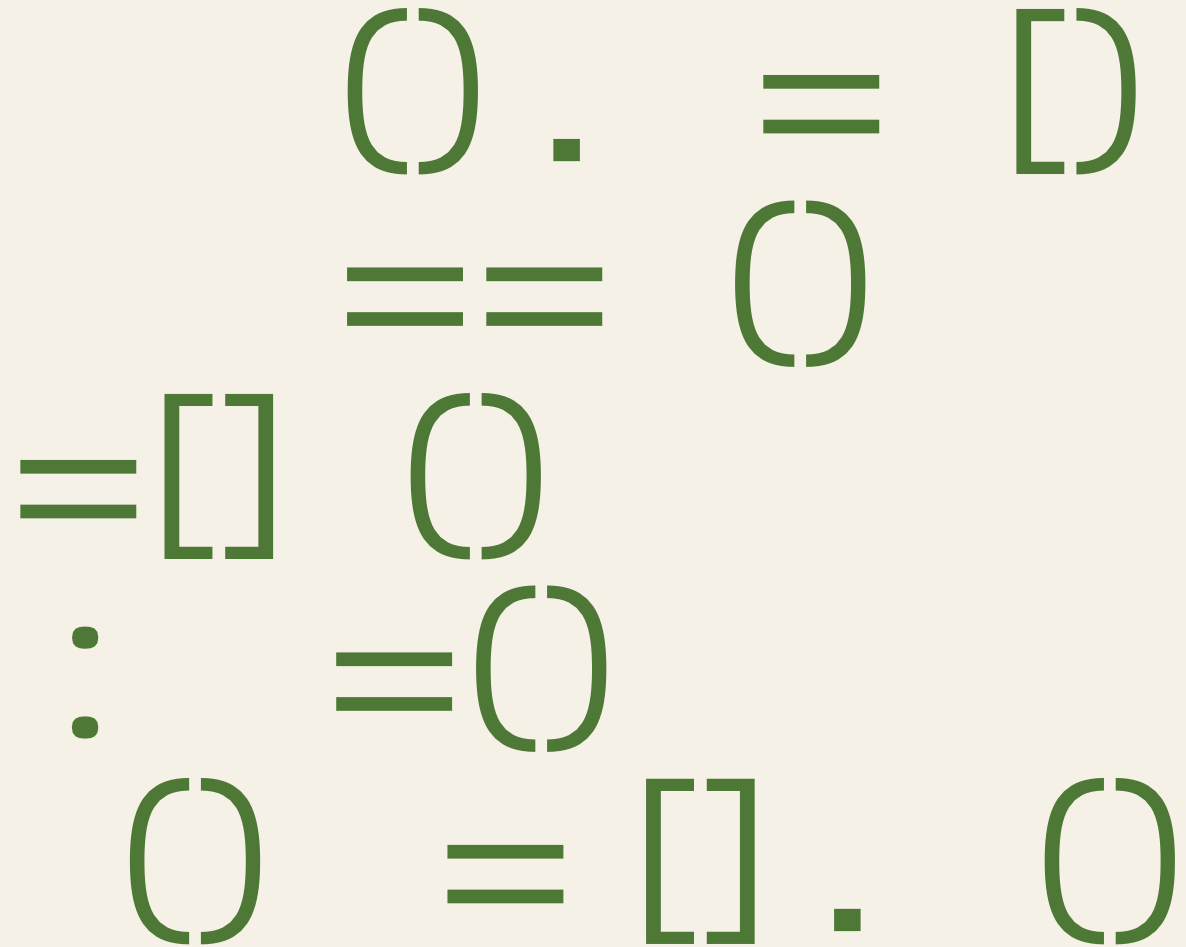
### A good piece of advice:

"I think data is very easy to work with, the way it is presented in many public websites, so you just have to get going.."

"And you should always be curious about the numbers. Because in my field, there are always people behind the numbers. So you need to keep a healthy portion of scepticism about any statistic."

# Sum up: Lessons learned and current challenges

- **Lessons learned:**
  - There are many means to make data more accessible – better metadata is one of them, especially for secondary use
  - Talk to both users and publishers when you can
  - Collaborate with other initiatives!
- **Current considerations and next steps**
  - Incompatible or hard-to-interpret (EU) legislation
  - Getting beyond surface-level metadata ("AI-readiness of data")
  - How to collect user demand for benefits-driven open data projects
  - A "Data Winter"?
  - Not forgetting daily operations





“

Thank you for listening!

Martin Skovbjerg Jensen

Danish Agency for Digital Government

# What is the exact relation between legal, semantic, and technical aspects?



Etc.

**GeoDCAT-AP 3.0.0**  
04 October 2024

▼ More details about this document

Latest published version:  
<https://semiceu.github.io/GeoDCAT-AP/releases/>

**mobilityDCAT-AP - Version 1.1.0**  
A mobility extension for the DCAT application profile for data portals in Europe

NAPCORE Recommendation 17 January 2025

**HealthDCAT-AP**  
Unofficial Draft 22 December 2023



## 1. I want better metadata

**1.A: I want to subscribe to changes in the metadata catalogue and/or the metadata of datasets I make use of**

- Consistent use of dataset id's so that one can subscribe to changes in metadata

**1.B: I want more information to assess whether data is fit for purpose**

- Further descriptions of data quality (completeness etc.)

**1.C: After examining an open dataset, I want information on how this data is also available (e.g. in realtime, more granular etc.)**

- Describing relations between datasets

**1.D: I am searching for information about something, not titles of datasets**

- Searchable list of concepts in the data sets (data models)

**1.E: I want to search for datasets that contain the same "data key" (e.g. CPR or CVR numbers) so that I can combine datasets**

- Highlighting shared concepts

**1.F I want to easily understand terms of access and use for non-open datasets**

- Finding the right specification / taxonomy to implement for this purpose

## 2. I want to query directly into the data (and not just the metadata)

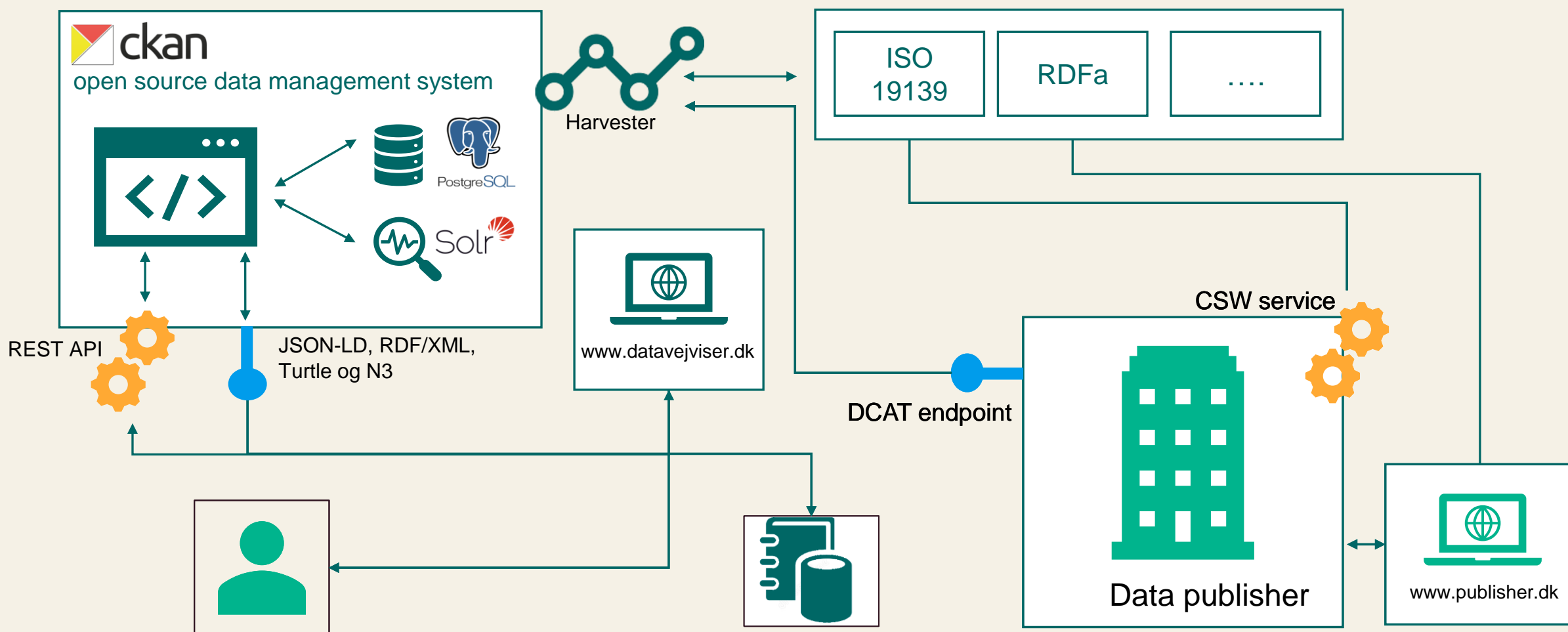
- APIs and metadata that let you query for data from different distributors through the metadata catalogue

## 3. I want more dataset descriptions, e.g. data that is (presently) neither open nor partially open

- Descriptions of datasets not yet made available

*Hypotheses – work in progress*

# Solution architecture



# Improving metadata quality (according to user needs)

- Through analysis of search logs, we saw that users were searching for bicycle paths and found nothing.
- This data is publicly available, in one very large dataset containing "the geographical basis of administration in Denmark", GeoDanmark.

## Nøgleord

Arealdække Bassin Begravelsesområde Billeder grundkort/Jorddække  
Brønddæksel Bygning Bykerne Cykelbane langs vej Cykelsti  
Cykelsti langs vej DHM Hestesko DHM Linje Dataportalen Drivhus  
Dæmning Erhverv Fordelingsrute Fysisk planlægning og geodata  
Gangsti Gartneri Gennemfartsrute GeoDanmark Grunddata  
Havn Hede Helipad Hovedrute Hovedsti Husbåd Høfde  
Høj bebyggelse Højspændingsledning Jernbane Kort og geodata  
Kortlægning og geodata Kyst Lav bebyggelse Lufthavn Mast  
Metro Miljø Mindre sti Motortrafikvej Motorvej Nedløbsrist  
Områdepolygon Ortofoto Regioner og byer Råstofområde Rørlagt  
S-tog SandKlit Skorsten Skov Sportsanlæg Sportsbane  
Startbane Sti Svømmebassin Sø Tank/Silo Telemast  
Togstation Tråd Under terræn Vandløbskant Vandløbsmidte  
Vej Vejkant Vejmidte Videnskab og teknologi Vindmølle  
Vindmøllepark Vådområde miljø

## GeoDanmark

GeoDanmark indeholder informationer om bygninger, veje, vandløb, søer og skove. Data giver et landsdækkende fællesoffentligt geografisk administrationsgrundlag til brug for sagsbehandling, planlægning, sammenstilling med andre data og visuelle præsentationer af Danmarks geografi. GeoDanmark er rammen for et samarbejde mellem alle landets kommuner og Styrelsen for Dataforsyning og Infrastruktur (SDFI) om etablering og vedligehold af et præcist, aktuelt, homogent og landsdækkende fællesoffentligt geografisk administrationsgrundlag. GeoDanmark hjælper beslutningstagere og sagsbehandlere i det offentlige med at skabe en bedre vidensbaseret og ensartet offentlig forvaltning til gavn for både borgere og virksomheder. Især byggesagsbehandling, vejadministration,