



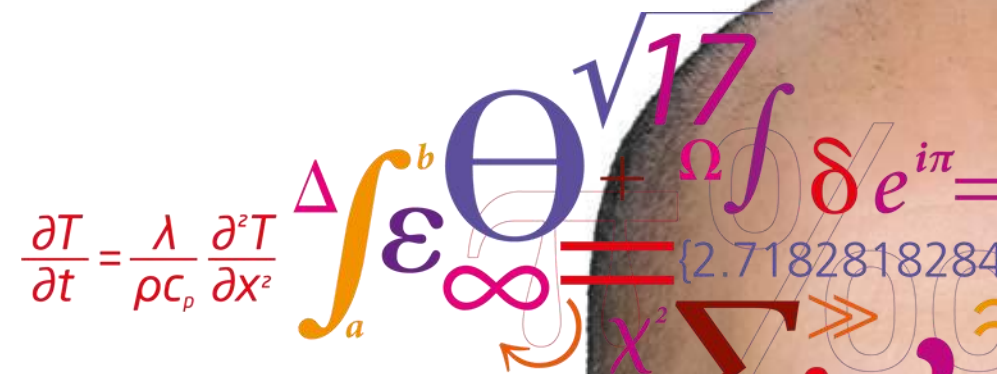
# The Science Cloud for "CITIES/Cities"

## Looking for partners

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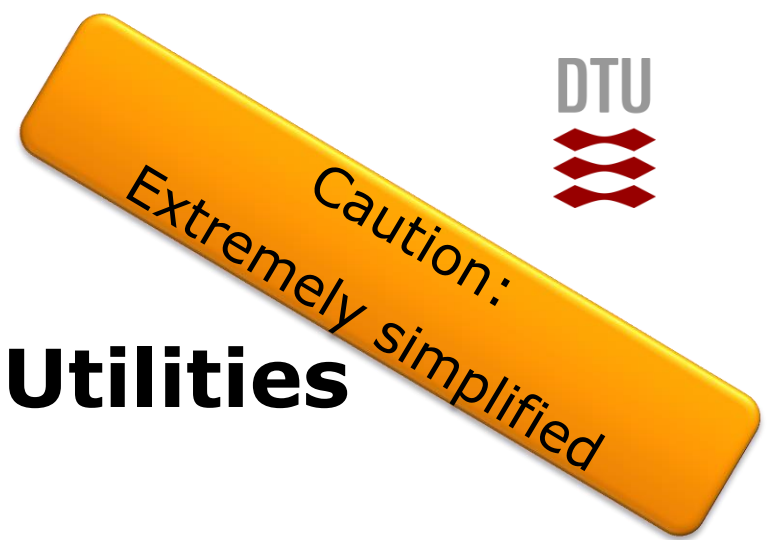
DTU Civil Engineering  
Department of Civil Engineering

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# Lessons learnt

## ... collaboration University - Utilities



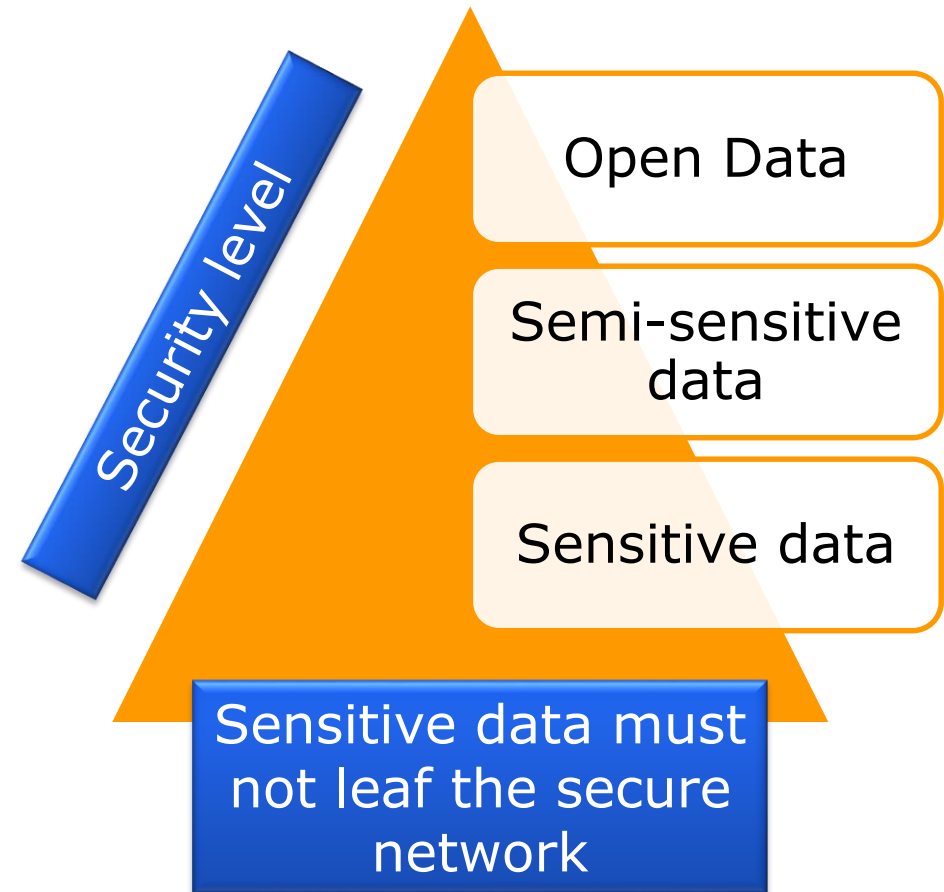
- Very different mind sets
- Companies:
  - Motivation: Extension of business, more services, more insight (operational level)
  - Data is a business source that has value
    - ... hence kept as a company secret
  - Sharing is possible from companies to universities without legal restrictions
- Universities:
  - Motivation: Knowledge generation
  - Data is the basis for research, validation, model generation etc.
  - Sharing is widely applied, but legally very difficult or impossible without user agreement
    - ... even for the data that the company have shared with universities

# Demand for Data Services

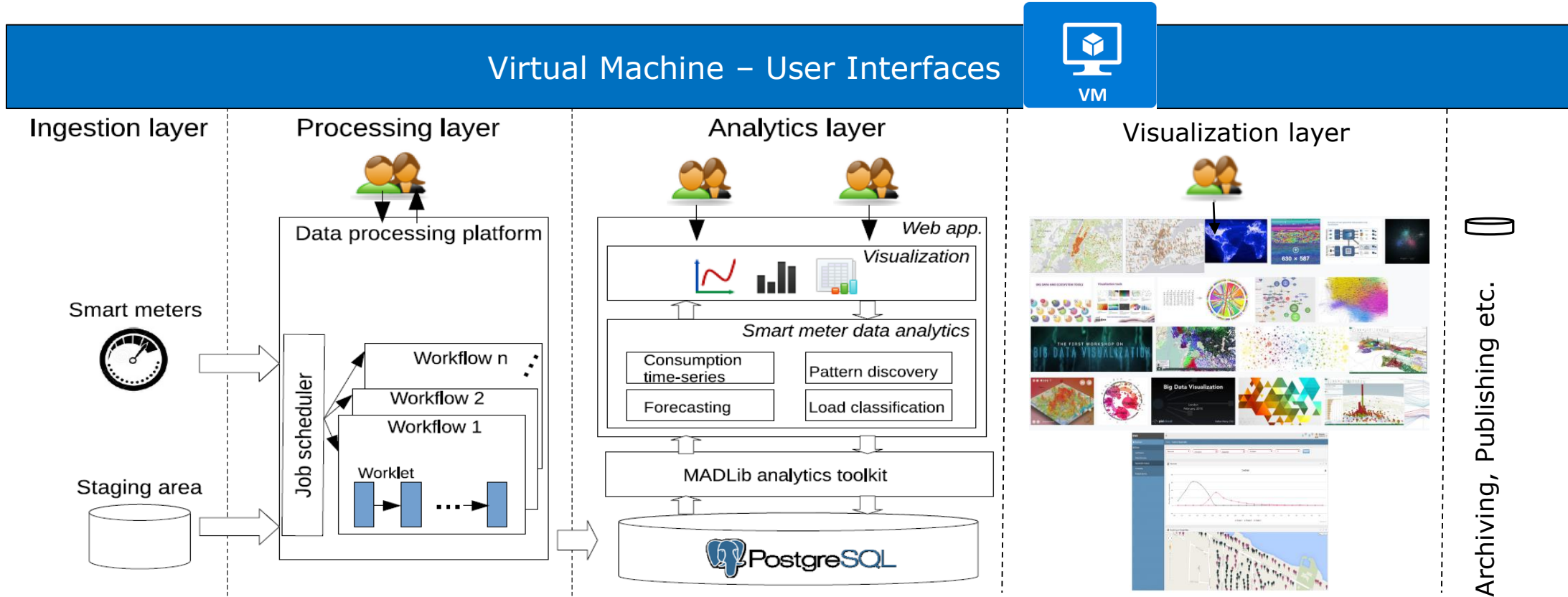
Data Storage



Computer Power



# CITIES Data Management System



**Fig. 1.** The system architecture of smart meter data analytics system

Discovery of data  
Citation of data

# Integration with other Infrastructures

data.deic.dk

EU data repository at Cern

**Data Storage = "Academic Dropbox"**

Name	Size	Modified
Heat MBBL (PERIODE)	15.6 MB	6 months ago
Model Case 1 2015	0 B	9 months ago
Model Case 1 Oct-Nov 2014	3.4 MB	last year
Model Case 1 Old Data	5.6 MB	9 months ago
4 folders	24.8 MB	

**zenodo**

Recent uploads

December 31, 2016 Dataset Open Access View

**In silico modeling of arch-3: Medeller and RosettaCM model building.**

Dmitrii M. Nikolaev

Here are all the files necessary for prediction of archaerhodopsin-3 structure using Medeller or RosettaCM algorithms. For modeling using Medeller please read README\_MEDELLER file for all the information. For RosettaCM: Please, before using these scripts adjust them for you cluster. You will ...

Uploaded on December 31, 2016.

**ckan** The open source data portal software

Case studies Feature Tour Developers FAQ Support Blog

UK: Adur District Council Spending

**UK: Adur District Council Spending**

demo.ckan.org/dataset/adur\_district\_spending

**UK: Adur Data**

From Spikes Cavell, Spottigli

For Adur, records from Apr

**Data and Reso**

Adur District Coun

Adur District Council Ap

License Not Specified

5

**CKAN, the world's leading open-source data portal platform**

CKAN is a powerful data management system that makes data **accessible** – by providing tools to streamline **publishing, sharing, finding and using** data. CKAN is aimed at data publishers (nation and regional governments, companies and organizations) wanting make their data open and available.

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# Actual applications

- Sønderborg building energy data – Analysis by DTU (small size)
- Middelfart data (under planning) (medium size ?)
- AVA building energy data – Analysis by DTU and AU (big size)
- Electricity data from Southern Denmark Region – Analysis by DTU (big size)
- Near Real Time data from Lyngby – IoT case – Mobility data (small size)
- Many many more ...



**We need your support**

**Include us in your projects & proposals**

Contact

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# Characteristics and Services

- Security
  - Forskningsnet communication service "Inside" (DeIC)
  - Identification, authorization by Wayf (DeIC)
- Virtual frontends for users (simple use; Windows, Linux,...)
- E-Lab books (Jupither)
- Expandable infrastructure