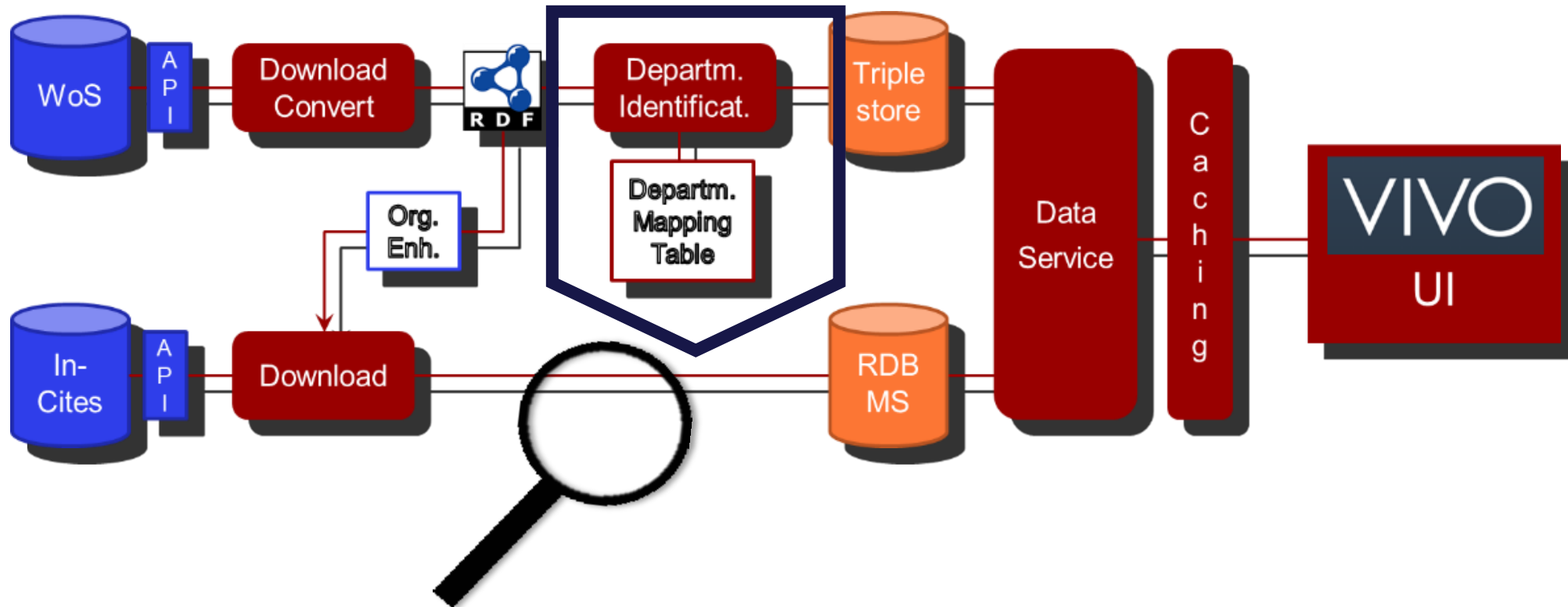DTU Research Analytics Platform

'Datavask' - Department Name Mapping

Nikoline Dohm Lauridsen (nidl@dtu.dk), DTU Research Analytics Office

Background

DTU Research Analytics Platform - http://rap.adm.dtu.dk

From the DTU Co-publication Report ➡️
To the DTU Research Analytics Platform (RAP)

- **Analyzes the collaboration between DTU and another university**
- **Includes detailed information on institutions and authors**
- **Based on Web of Science data**
- **Done manually in Excel**
- **Time-consuming**
- **Growing demand**

VIVO connect share discover

Clarivate Analytics

DTU RAP
Research Analytics Platform

We have 'Organization-Enhanced'

We need 'Department-Enhanced'!

Collaboration by DTU department

Co-publications DTU og The University of

DTU Department	Count
DTU Food	15
DTU Fotonik	14
DTU Space	8

DTU department	Co-pubs	Partner departments
DTU Food	14	Expand to show details
DTU Fotonik	14	Expand to show details
DTU Space	7	Expand to show details
DTU Systems Biology	6	Expand to show details
DTU Electrical Engineering	5	Expand to show details
DTU Chemistry	3	Expand to show details
DTU Civil Engineering	3	Expand to show details

M; Norgaard-Nielsen, HU; Oxborrow, CA; EM; Hamann, J; Gaensler, BM;
Ctr Translat Data Sci: Scalzo, RA;

Organization-Enhanced in WoS

OG=Technical University of Denmark

Organization Name:	Add	TECHNICAL UNIVERSITY OF DENMARK
Other Names:		DTU; TECH UNIV DENMARK; DANMARKS TEKNISKE UNIVERSITET
Address:		ANKER ENGELUNDS VEJ 1 BYGNING 101A, 2800 KGS. LYNGBY, DENMARK ,KONGENS LYNGBY, DENMARK
Website:		http://www.dtu.dk.proxy.findit.dtu.dk/
Name Variants:	Add	348 TECH UNIV DENMARK
	Add	5 TECH UNIV DENMARK
	Add	ANKER ENGELUNDS VEJ 1
	Add	AQUATECH UNIV DENMARK

Unified list of institution name variants

Based partly on de-centralised input from WoS-users

https://clarivate.libguides.com/woscc/institution

The challenge is...

ctr catalysis sustainable chem csc
bioinorgan chem grp
dept chem nanodtu
ctr biomembrane phys
ctr green sustainable chem
inst chem
ctr catalyt sustainable chem
ik dtu 207
cmm
memphys
nanochem
dept chem nano dtu
dept chem energy mat
dept med engn
energy mat grp
organ chem lab
danish chinese ctr nanomet sect mat sci adv cha
ctr biomembrane phys memphys
metalloprot chem engn
emphys ctr biomembrane phys
ctr sustainable green chem csg
ik 207 dtu
dtu kemi
ctr nano med theranost
dtu 207

Etc.
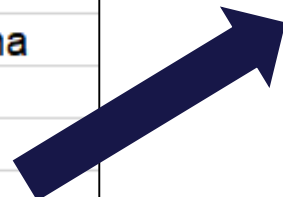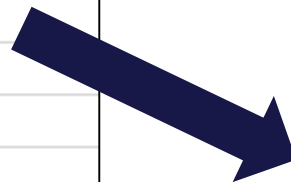
Department Name Mapping

- The university department names are normalized by manually mapping WoS department names to official DTU department names resulting in a local **'Department-Enhanced'** list

1st data load in 2017: approx. **29.000** publications = approx. **2.000** name variants mapped

- 60% - long tail of name variants used only once or twice

- Also mapping to **Former Departments** and **Department Unknown**

```
<address_name>

    <address_spec addr_no="3">

        <full_address>
```

```
rap:dtusuborg-dtu-physics

    a                              wos:SubOrganization ;

    rdfs:label                     "DTU Physics" ;

    wos:subOrganizationName        "DTU Physics" ;

    wos:subOrganizationNameVariant "Dept Phys" ;

    wos:subOrganizationNameVariant "Dept Phys Bldg" ;

    wos:subOrganizationNameVariant "Dept Phys Bldg 307" ;

    wos:subOrganizationNameVariant "Dept Phys Nano DTU" ;

    ... 99 more name variants ...
```

```
        </names>
    </address_name>
```

```
wos:subOrganizationName  "Dept Phys" .
```

Web of Science

Search   Search Results

Proof of the identity between the depletion layer thickness and half the average sp
polymer chain

By: Wang, YW (Wang, Yanwei)[1] ; Hansen, FY (Hansen, Flemming Y.)[2] ; Peters, GH (Peters, Guenther H.)[3] ; Hassager, O (Hass
View Web of Science ResearcherID and ORCID

Abstract

The confinement analysis from bulk structure (CABS) approach [Y. Wang , J. Chem. Phys. 128, 124904 (2008)] is extended to determine the depletion profiles of dilute polymer solutions confined to a slit or near an inert wall. We show that the entire spatial density distributions of any reference point in the polymer chain (such as the center of mass, middle segment, and end segments) can be computed as a function of the confinement size solely based on a single sampling of the configuration space of a polymer chain in bulk. Through a simple analysis based on the CABS approach in the case of a single wall, we prove rigorously that (i) the depletion layer thickness delta is the same no matter which reference point is used to describe the depletion profile and (ii) the value of delta equals half the average span (the mean projection onto a line) of the macromolecule in free solution. Both results hold not only for ideal polymers, as has been noticed before, but also for polymers regardless of details in molecular architecture and configuration statistics. (C) American Institute of Physics.

Keywords

KeyWords Plus: SELF-AVOIDING WALKS; EXCLUSION CHROMATOGRAPHY; EQUILIBRIUM DISTRIBUTION; CYLINDRICAL PORES; ORDERED SPANS; POROUS-MEDIA; MACROMOLECULES; DENSITY; POTENTIALS; SIMULATION

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Web of Science

Search   Search Results

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JOURNAL OF CHEMICAL PHYSICS
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Document Type: Article

View Journal Impact

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  Technical University of Denmark

WoS Department	DTU Department	#
dept elect engr	DTU Electrical Engineering	346
danish polymer ctr	DTU Chemical Engineering	69
memphys ctr biomembrane phys	DTU Chemistry	9
biomimet membrane grp	DTU Environment	7
dtu byg brovej	DTU Civil Engineering	1
delta idemolab	DTU Compute	1

FAQ - the technical perspective

- How is the organisational data retrieved?
  - **From WoS via SOAP API (for now)** → Experimenting with the new REST API

  https://developer.clarivate.com

- With what kind of query?
  - **The Organisation-Enhanced search: OG=(Technical University of Denmark) timespan 2007-01-01-now**

- How often?
  - **The end of every month**

- In what format?
  - **WoS specific XML (for now)** → XML or JSON w. REST API

- Data conversion?
  - **The WoS XML data is converted to RDF (VIVO format) using Python**

FAQ - the practical perspective

- How much work?
  - **1st load and mapping required a lot of 'man power'**

- And what about the monthly updates?:
  - **Approx. 20-60 new department name variants to map**

- How many variants are mapped today?
  - **2.500 variants has been mapped to 30 DTU 'Department-Enhanced'**

- Where is the mapping being done?
  - **Excel**

Other WoS data enhancements in DTU RAP

Country name mapping

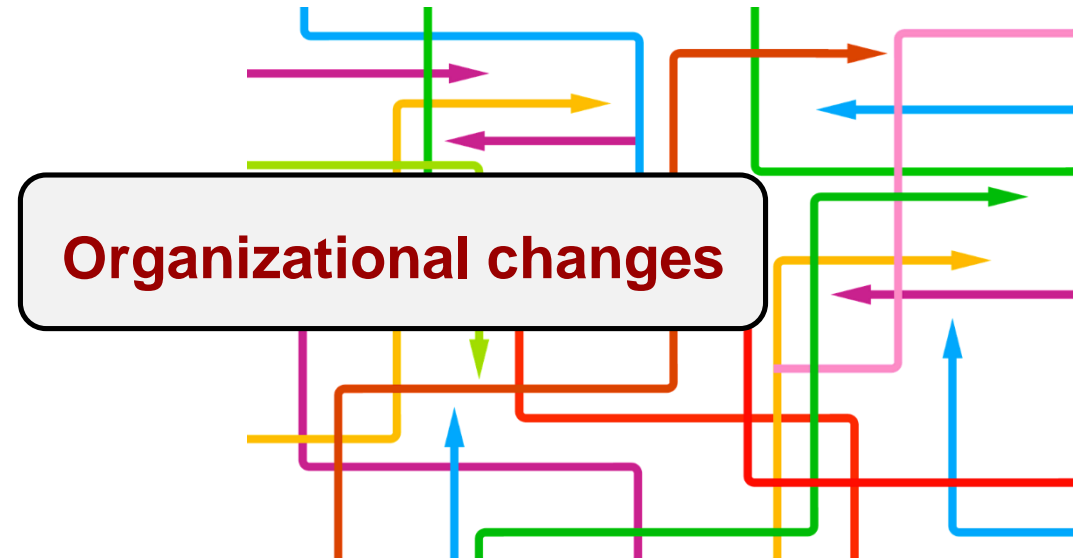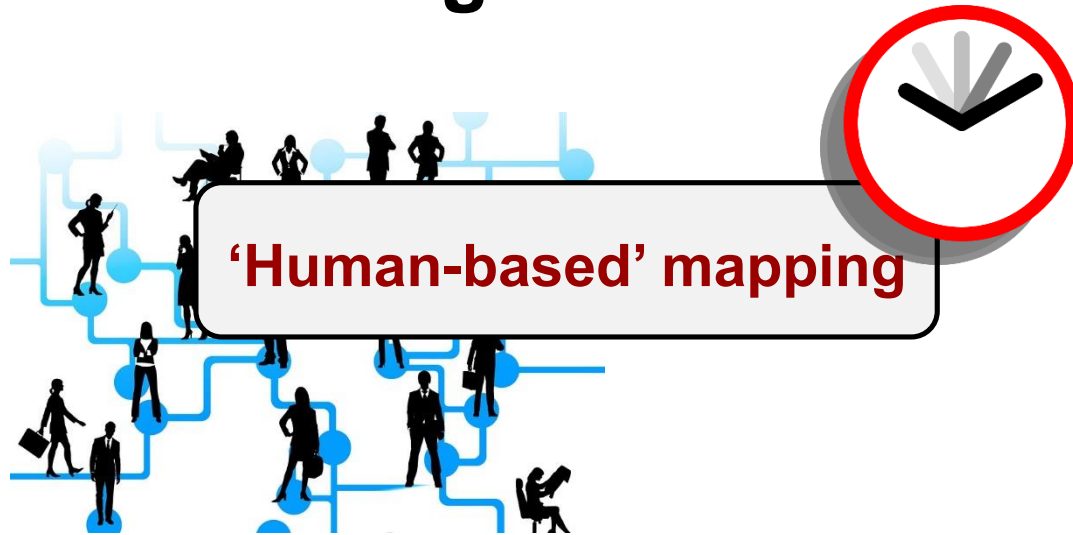**Adding missing countries**

→ Discrepancy between WoS and VIVO definition of countries

Choosing a single country for an organization

→ OG-Enhanced have affiliations connected to multiple countries

Challenges

'Human-based' mapping

Organizational changes

'Department Unknown'

Further perspectives

Definition of the Institution is based on **individuals**

Profile Refinement Service

'Algoritmically' based department/author unification

My Organization

Comments/Questions?

http://rap.adm.dtu.dk

Script and query description to be on **Github** soon

For further info – contact **Christina Steensboe** (chste@dtu.dk)