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The Use of PIDs in Research Assessments

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PIDapalooza 2020

The Use of **PIDs** in Research Assessments

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Background – **OPE**n **RE**search **A**nalytics

In the OPERA project we:

Explore and review: *Opportunities and barriers to include Open Science and Ope... in research analytics*

Identify: *the most relevant and promising indicators for dat... Open Science*

Examine: *relevant quantitative indicators for the societal impact of research in the humanities and social sciences*

Develop: *Research analytics systems with* **Open**:

- *Metrics*
- *Systems*
- *Software*
- *Code*
- *Tools for visualization and analysis*
- *Indicators for* <u>Research Assessment</u>

Reports and reviews soon to be published on https://deffopera.dk

Background – **OPEn REsearch Analytics**

Part of OPERA: *A WP that aims at developing Open metrics and Open systems for a university's research assessment on university and department level. While the data will be traditional licensed bibliographic and bibliometric data, the concepts, metrics and system software will all be open, documented and freely available for reuse – including the adaptation to other data sets.*

www.deffopera.dk

@DeffOPERA

Research Analytics Platform – **Assessment Module**
(RAP Research Assessment)

Research Assessments Today

Research assessment at universities is often a combination of quantitative analytical metrics and qualitative judgement by scientific peers.

- To generate and communicate such metrics well is quite a task – very human resource intensive.

For example

- At DTU, we only generate certain in-depth metrics for researchers, their groups and departments, every five years – when a department is up for research assessment by international expert peers of its field.

Based on data from closed and comercial vendors

Based on advanced but very static author/ affiliation searches

Hierarchical approach – management checks publication lists

DISCLAIMER
From the perspective of a technical university

Responsible Research Assessments – it starts with data!

Be open and transparent by providing data and methods used to calculate all metrics

DORA, San Francisco Declaration on Research Assessment

The range of data sources and indicators available to practitioners are constantly changing (…)

Introducing SCOPE – a process for evaluating responsiby (The Bibliomagician)

Data sources should be clearly understood, accurate, up to date and have sufficient coverage for the purpose intended

Principle for the use of indicators in research assessment and management, St. Andrews University

Allow those evaluated to verify data and analysis

Leiden Manifesto for Research Metrics, Principle 5

How underlying data are collected and processed – and the extent to which they remain open to interrogation – is crucial.

The Metric Tide

RAP Research Assessment – motivation

A shift from name/affiliation search to relying on PID's

A shift from a very human resource intensive task, to a more automated one

Engage the researchers in the research assessment process – giving them the control (somewhat) back

Making research assessment more flexible and hereby meeting the different needs of various scopes and stakeholders

Opening up the assessments and making them more researcher-centric. Hence meet the data requirements of responsible metrics

A more sustainable approach to research assessments also allocates resources to meet other perspectives of research assessment and impact

RAP Research Assessment – PID motivation

A shift from name/affiliation search to relying on PID's

Engage the researchers in the research assessment process – giving them the control (somewhat) back

Opening up the assessments and making them more researcher-centric. Hence meet the data requirements of responsible metrics

Bottom-up approach
→ from affiliations to individuals
Relying on PID's
→ ORCID-based

Dynamic Research Assessments – bottom up data?
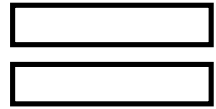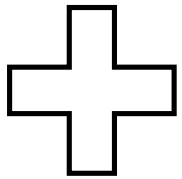
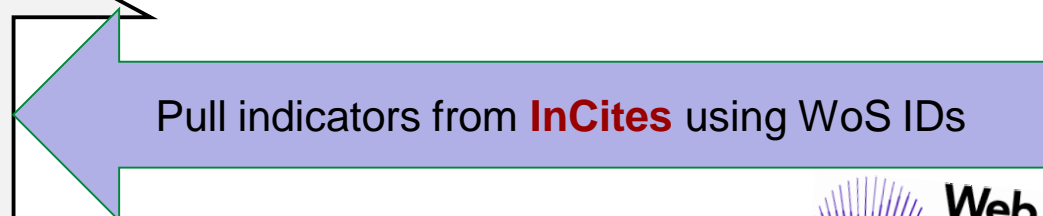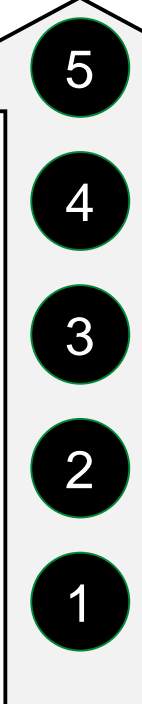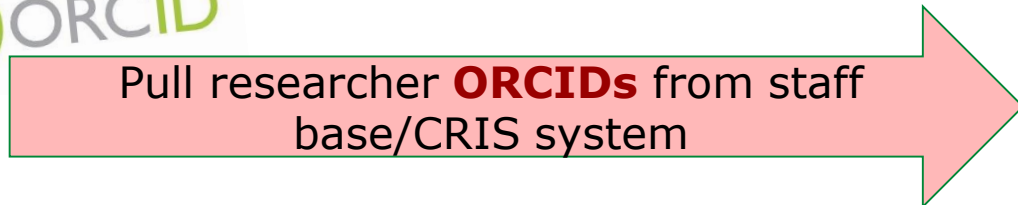
A University Research Analytics Platform

Creating an assessment module where the researcher is involved more directly

- To do assessment metrics **well**, you must build them bottom-up
  - From publication lists of individual researchers
    - **Author identity challenge**
  - Adding knowledge of the university's research organization
    - **Organizational dynamics challenge**
- To do such metrics with **integrity**, you must comply with the Leiden Manifesto
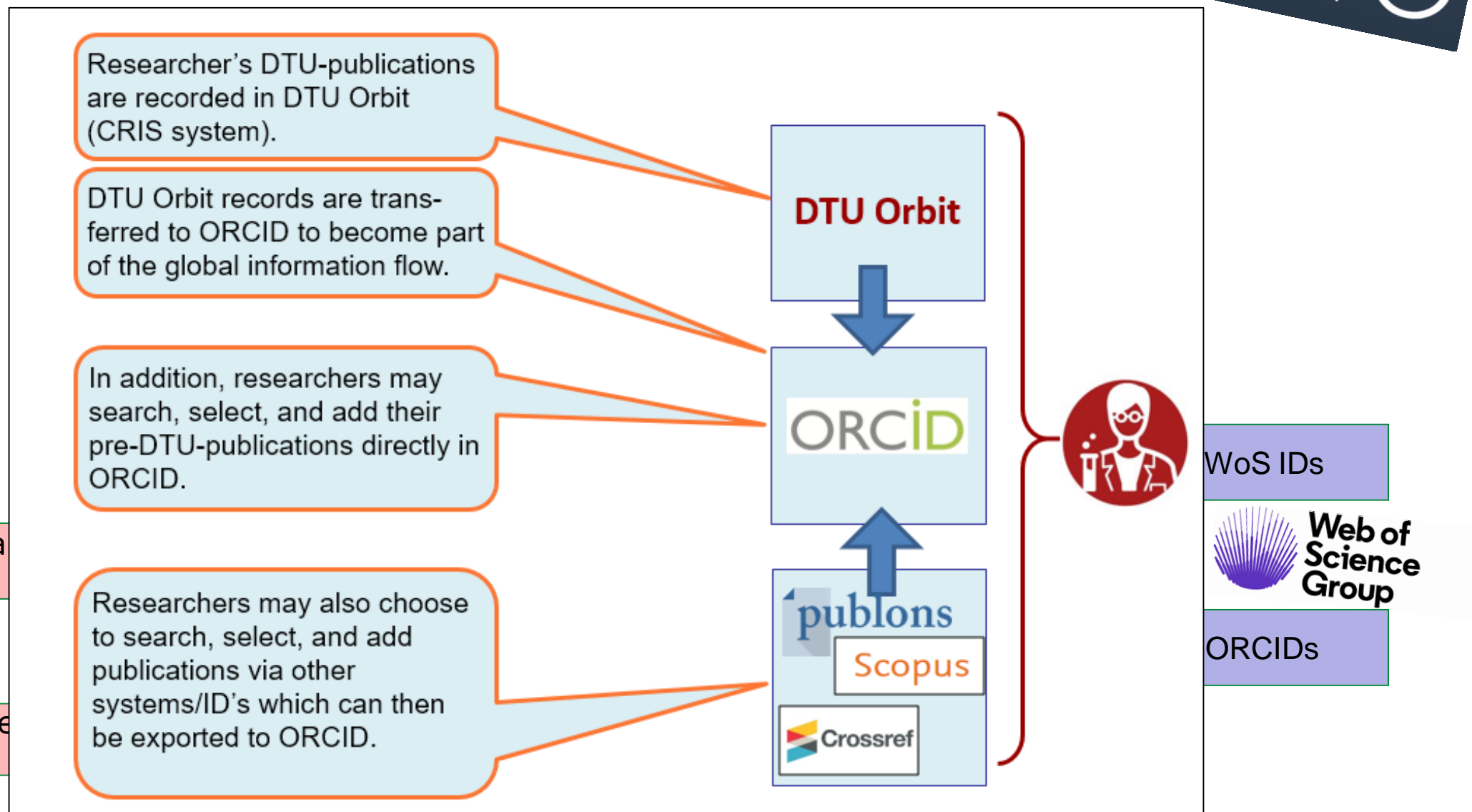 - Principle 5: *Allow those evaluated to verify data and analysis*

➔ Here's what we're planning for the next year

RAP Research Assessment – setup

Single Researcher Info & Indicators

Single Researcher Publication List

Research Group Info & Indicators

Depart. Section Info & Indicators

Depart-ment Info & Indicators

Univer-sity Info & Indicators

5
4
3
2
1

Pull indicators from **InCites** using WoS IDs

Pull researcher **affiliations** from staff base/CRIS system

Pull publications from **WoS** using ORCIDs

Pull researcher **ORCIDs** from staff base/CRIS system

RAP Research Assessment – setup (ORCID)

Researcher's DTU-publications are recorded in DTU Orbit (CRIS system).

DTU Orbit records are transferred to ORCID to become part of the global information flow.

In addition, researchers may search, select, and add their pre-DTU-publications directly in ORCID.

Researchers may also choose to search, select, and add publications via other systems/ID's which can then be exported to ORCID.

DTU Orbit

ORCID

publons
Scopus
Crossref

Pull resea

Pull rese

WoS IDs

Web of Science Group

ORCIDs

RAP Research Assessment – setup (ORCID)

How could RAP Research Assessment look like?
→ Looking at researchers

How could RAP Research Assessment look like?

→ Looking at Departments/Sections

Department A

Researchers

> Takes you to the Researchers module defined by the particular department

Sections

Section A

Section B

> Takes you to the sections page

Download

Publication Output and Impact Summary - Department

From **2015 ▾** – **2020 ▾**

Department/Section	Scientific Staff Included	Publications 2015-2019	Citations 2015-now	Simple Citation Impact	Normalised Citation Impact	Publications in Top 10% (Proportion)	Publications in Top 1% (Proportion)	% of International Publications	% of OA Publications	ETC.
Department X	117	914	16.402	17,9	1,43	19,5%	2,1%	56,0%	40,0%	N/A
Section A	14	79	1.124	14,2	1,32	15,8%	N/A	20,0%	54,0%	N/A
Section B	12	113	1.791	15,8	1,49	23,9%	N/A	45,0%	9,0%	N/A
Section C	23	106	946	8,9	0,96	6,7%	N/A	14,0%	8,0%	N/A
Section D	16	207	2.018	9,7	1,04	10,2%	N/A	98,0%	7,0%	N/A
Section E	12	199	2.273	11,4	1,22	8,0%	N/A	63,0%	98,0%	N/A
Se...		116	1.186	10,2	1,16	9,0%	N/A	58,0%	45,0%	N/A
Se...		127	724	5,7	0,86	6,0%	N/A	78,0%	50,0%	N/A

> Takes you to the publications page defined by the particular department

Publications

Document type: Article ☑   Review ☑   Proceedings paper ☑   Abstracts ☑   Corrections ☑   Other ☑

How could RAP Research Assessment look like?

→ Looking at the University

DTU - Publication Summary

20.871	1.450	4.509	567
Article	Review	Proc. Paper	Other

Makes it possible to take you from the university overview page to a defined department overview page instead

Entire university ▾

- Entire university
- Centre for Oil and Gas - DTU
- DTU Aqua
- DTU Bioengineering
- **DTU Bioinformatics**
- DTU Biosustain
- DTU Business

Download

From 2015 ▾ – 2020 ▾

Publication Output and Impact Summary – All Departments

Department	WoS publications 2014-2018	Simple citation impact	Normalized citation impact	In top 10 % most cited	In top 1 % most cited
DTU (Baseline)	15.929	14,8	1,52	18,3	2,3
Department A	1.034	12,2	1,65	21,1	2,4
Department B	756	14,8	1,67	18,8	3,0
Department C	781	25,2	2,42	29,6	4,6
Department D	547	12,5	1,27	18,8	2,6
Department E	44	10,8	1,71	25,0	4,5
Department F	1.039	10,8	1,55	16,7	1,6
Department G	890	12,1	1,38	17,4	1,7
Department H	963	17,7	1,20	15,2	1,3
Department I	983	17,0	1,71	21,7	3,3
Department J	849	21,4	1,70	22,6	2,4
Department K	984	15,9	1,74	21,6	4,2
Department L	720	12,6	1,41	10,3	1,5
Department M	1.045	13,6	1,13	14,1	0,9
Department N	822	11,5	1,36	19,1	1,0
Department O	1.042	11,3	1,26	14,7	1,6
Department P	884	16,2	1,52	22,4	2,6
Department Q	242	16,9	1,21	15,3	0,8
Department R	305	8,4	1,16	12,8	1,6
Department S	517	18,4	1,72	18,4	2,9
Department T	601	11,9	1,07	12,8	0,8

Document type: Article ☑   Review ☑   Proceedings paper ☑   Abstracts ☑   Corrections ☑   Other ☑

RAP Research Assessment – where are we now?

1st test on selected departments:

- ORCID – coverage in Web of Science
- ORCID – identification and grouping of possible issues

2nd test looking in to indicators from InCites/API options

- Load data and see how we can work with the data in the RAP Assessment system

Test of ORCID search via WoS API vs. manual search in WoS	
Publication Year:	All Years
Organization-Enhanced:	All Organizations
Overview Tab:	
Creates an overview of the total no. of publications, citations and (if possible) h-index per ORCID requested.	
OI=ORCID	
ORCID Tabs:	
Each 'ORCID Tab' represents a publication list found via the API for each ORCID represented in the 'Overview Tab'.	
AU=Authors	
TI=Title	
SO=Source (journal title)	
DT=Document Type	
C1=Adress	
OI=ORCID	
TC=Times Cited (in WoS Core Collection)	
PY=Publication Year	
DI=DOI	
UT=Accession Number	

RAP Research Assessment – where are we now?

1st test on selected departments:

- **ORCID – coverage in Web of Science** ✓
- **ORCID – identification and grouping of possible issues** ✓

2nd test looking in to indicators from InCites/API options

- Load data and see how we can work with the data in the RAP Assessment system

Test o	
Publica	
Organi	
Overvi	
Create	
I=OR	
Each 'C	
AU=Au	
TI=Titl	
SO=So	
DT=Do	
C1=Ad	
OI=OR	
TC=Tim	
PY=Pu	
DI=DO	
UT=Ac	

Results when looking at the departments being evaluated in 2019:

- Retrieving a researcher's publications using ORCID gives the same result using the Web of Science UI as the Web of Science API.

- ORCID searches using the Web of Science API covers approx. **90%** of the publication found by using advanced name- and affiliation searches in the Web of Science UI

- Most missing results is because an ORCID profile is empty or incomplete (researcher motivation is important!)

- Synchronization issues between ORCID→Web of Science is often because of poor metadata in ORCID or bad title match between the two systems

RAP Research Assessment – advantages

Researcher advantages of metrics based on ORCIDs:

- Publication lists reflect the researcher's self-maintained list in ORCID.org

- Researcher involvement/control - Leiden Manifesto compliance

- Publication lists are not the result of complicated/expert searching, which depends on the skills (or lack thereof) of an individual administrator – and rarely come out the same, if done by different individuals

- Publication list derived metrics become similar/comparable, no matter who does them and no matter where they are done (towards global validity)

System advantages of metrics based on ORCIDs:

- ORCID-searching may be automated without loss of precision

RAP Research Assessment – challenges

Researcher challenges of metrics based on ORCIDs:

- Researchers will have to actively choose to update their ORCID (and understand how!) – which makes researcher encouragement essential

- ORCID profile and data has to be public in order to be adapted to other systems

- Lack of 'search control' and modifications – better possibility of 'gaming' or disrupting the data basis?

- Sustainability in PID – will some of the problems we see with author search transpire into PID searches?

System challenges of metrics based on ORCIDs:

- Synchronization between different commercial vendors and ORCID.org – and who is responsible?

- Could create a even more so a distance between the researcher being evaluated and the 'evaluator' – could it become efficiency over customization?

… A LOT more – let's interact!

Go to: **PollEv.com/nikolinedohm030**

Do you think PIDs could improve Research Assessments?
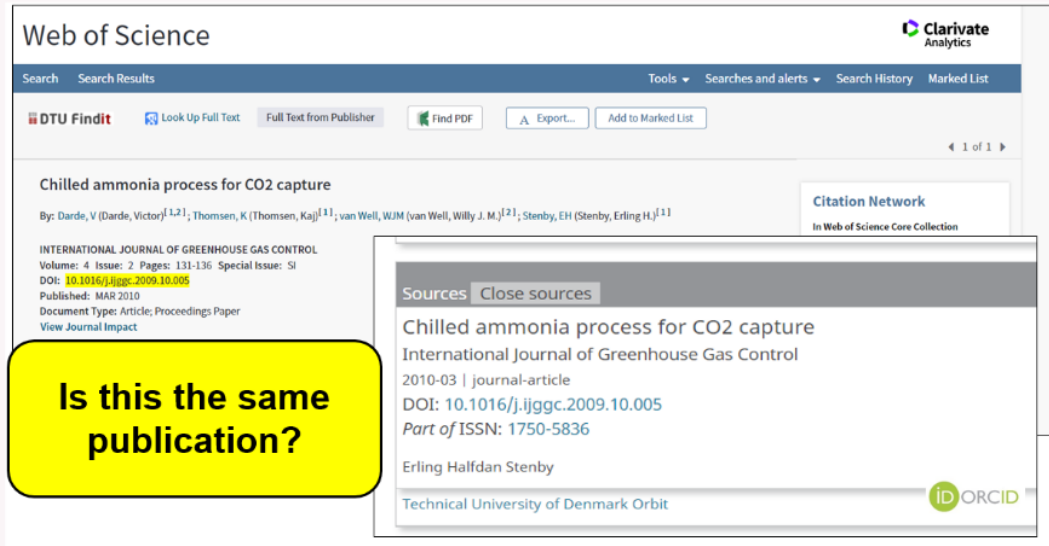
How to best motivate researchers into maintaining their ORCID?

Top

5	▬▬	Integrate into PDR / annual revo
4	▬▬	Train them first then explain cost of not doing it
4	▬▬	Show clear benefits, how their information is connected
3	▬	By showing the benefits
2	▬	do it for them - automate
2	▬	Personal evaluation / tenure
2	▬	Abolish research gate
2	▬	Best motivation: members to build integrations that allow to import or export data

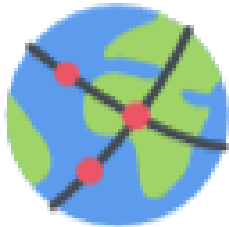|		
2	▬	Tenure and systems using ORCID
2	▬	demonstrate value through practical examples that contextually resonate with the researcher / domain / context
1	▬	It will be less work once you start
1	▬	Show them the cool things you can do with PIDs / PID Graph
1	▬	More integrations at organizations! So the benefits are clear for them
0	▬	integration with their preferred profile provider
0		cookies
0		Automatic update.

Thank you!

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