The Use of PIDs in Research Assessments

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In the OPERA project we:

**Explore and review:**
- Opportunities and barriers to include Open Science and Open data in research analytics
- the most relevant and promising indicators for data sharing and Open Science

**Identify:**
- Relevant quantitative indicators for the societal impact of research in the humanities and social sciences

**Examine:**
- Research analytics systems with **Open:**
  - Metrics
  - Systems
  - Software
  - Code
  - Tools for visualization and analysis
  - Indicators for Research Assessment

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

Research Analytics Platform – Assessment Module (RAP Research Assessment)

www.deffopera.dk
@DeffOPERA
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.

**DISCLAIMER**

From the perspective of a technical university
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 responsibility (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

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

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

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

1. Pull researcher ORCIDs from staff base/CRIS system
2. Pull publications from WoS using ORCIDs
3. Pull researcher affiliations from staff base/CRIS system
4. Pull indicators from InCites using WoS IDs
5. Pull researcher info & indicators 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.
RAP Research Assessment – setup (ORCID)

1. Pull researcher ORCIDs from staff base/CRIS system
2. Pull publications from WoS using ORCIDs
3. Pull researcher affiliations from staff base/CRIS system
4. Pull indicators from InCites using WoS
5. DTU Orbit
How could RAP Research Assessment look like?
→ Looking at researchers

Researcher C (Name + Surname)
ORCID: 0000-0003-2738-0325 Email: c@dtu.dk

DTU affiliation year by year
2020: DTU Physics - Quantum Physics and Information Technology – Section leader, Professor
2019: DTU Physics - Quantum Physics and Information Technology – Professor
2018: DTU Physics - Radiation Physics – Professor
2017: DTU Chemistry - Molecular Materials – Associate Professor

Publication Output Summary

<table>
<thead>
<tr>
<th>Articles</th>
<th>Reviews</th>
<th>Proc. Paper</th>
<th>Other</th>
</tr>
</thead>
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<tr>
<td>201</td>
<td>21</td>
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<td>1</td>
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Indicators/Metrics

<table>
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<th>Publications</th>
<th>Year of 1st Pub.</th>
<th>Citations</th>
<th>Cit./Publ.</th>
<th>Cit./Year</th>
<th>H-index</th>
<th>% of Int. Collab.</th>
<th>% of OA publ.</th>
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</thead>
</table>

Access Control

Takes you to the publications page defined by the particular researcher

Document type: Article ✔ Review ✔ Proceedings paper ✔ Abstracts ✔ Corrections ✔ Other ✔
How could **RAP Research Assessment** look like?

→ Looking at Departments/Sections

### Department A

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Sections</th>
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<tr>
<td></td>
<td></td>
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</table>

**Publication Output and Impact Summary - Department**

<table>
<thead>
<tr>
<th>Department/Section</th>
<th>Scientific Staff Included</th>
<th>Publications 2015-2019</th>
<th>Citations 2015-now</th>
<th>Simple Citation Impact</th>
<th>Normalised Citation Impact</th>
<th>Publications in Top 10% (Proportion)</th>
<th>Publications in Top 1% (Proportion)</th>
<th>% of International Publications</th>
<th>% of OA Publications</th>
<th>ETC.</th>
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<td>2,1%</td>
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**Publications**

- Document type: Article ✓ Review ✓ Proceedings paper ✓ Abstracts ✓ Corrections ✓ Other ✓
How could RAP Research Assessment look like?

→ Looking at the University

### DTU - Publication Summary

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<td>Other</td>
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### Publication Output and Impact Summary – All Departments

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<thead>
<tr>
<th>Department</th>
<th>WoS publications 2014-2018</th>
<th>Simple citation impact</th>
<th>Normalized citation impact</th>
<th>In top 10% most cited</th>
<th>In top 1% most cited</th>
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Document type: Article ✔ Review ✔ Proceedings paper ✔ Abstracts ✔ Corrections ✔ Other ✔
RAP Research Assessment – where are we now?

1\textsuperscript{st} test on selected departments:
- ORCID – coverage in Web of Science
- ORCID – identification and grouping of possible issues

2\textsuperscript{nd} 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
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

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
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

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

### Additional

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

Web of Science

DO: 10.1016/j.ijggc.2009.10.005
Port of ISSN: 1750-5836
Erting Halfdan Stenby
Technical University of Denmark Orbi

Is this the same publication?

95%

5%
How do we ensure that the commercial vendors integrate and keep the synergy with open and non-profit PIDs?

“Work closely to them, review their integration regularly, to guarantee best practices and best use”
“Support them continuously.”

“Demonstrations”

“Negotiation”
“Demonstrate for it!”
“why is non-profit necessary?”

“Make it the best option available”
“Organize a national referendum”

“If supporting these for local use is a valued service, show your willingness to pay.”
“Pressure”
“Pay them”

“Universities and research institutes have to request it!!!!”
“report a bug”
“engage the community - bottm up”

“Celebrating those that do shaming those that dont (good/bad publicity)”
“Steal their devs for VIVO”

“incentivize the right behavior”
“Show community demand - they won't pay for things that do less than competitor”
Thank you!

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