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SciVal
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House keeping

• All phones are automatically on mute

• Submit your questions at any time by clicking on the “Q&A” icon in the top menu bar

• We will go through the questions at the end of the session

• Follow the conversation on Twitter @SciVal
In this release: Understanding socio-economic impact
Our vision on the world of research

Input Metrics: Enabling Research
- Recruit and evaluate researchers
- Secure and manage funding
- Establish partnerships

Process Metrics: Doing Research
- Search, discover, read, review, experiment, analyze

Output and Outcome Metrics: Sharing Research
- Manage Data
- Publish & Disseminate
- Partner with businesses
- Esteem (authority & reputation amongst peers)
- Impact (benefit to society)

Societal-economic impact

1. Scopus views metrics
2. Patent-to-article citations metrics
3. Mass media mentions metrics
4. Awards metrics (from funding orgs)
5. Scholarly activity metrics (Mendeley, CiteULike)
Enhancements

Major enhancements

1. **Patent-to-article citations** from the 5 largest patent offices.
2. **Scopus views data** available in all modules

Other enhancements

- Create **departmental structure** even more quickly and easily with the simplified workflow
- Almost **1,000 new institutions** created
- SciVal migrates to the **Amazon Cloud**
1. Patent-to-article citations
1.1 Knowledge flows: academia – industry connection

**Academia**
Focus on scientific breakthroughs and advancements

**Industry**
Focus on development and commercialization

**Publications**

**Patents**

Scholarly output citations in patents provide a proxy for innovation and the potential to transfer knowledge to industry.
1.2 Understanding patents and patent lifecycle

What is a patent?

- Patents protect **inventions**, which are novel, inventive and industrially applicable
- **Full technical description** of invention is disclosed
- All patent data is **available publically**

**Patent Lifecycle**

- ~18 months for a patent to be published
- Up to 5 years for **grant decision**
- **Valid** for a maximum of 20 years
1.3 What can patent-article citations tell you about research?

Patent citations

- Patents, in the same way as scientific literature, contain references to previous work
- Citations in patents are generated along the lifecycle of a patent
- Citations could be added by applicant as well as patent offices

1.4 How do we use patent-article citations?

Patent – article citations serve as an additional indicator to analyze research impact as well as see potential of knowledge transfer to industry.

SciVal Metrics

*Facilitate the deep-dive into patent-article citations*

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citing-Patents Count</td>
<td>Count of patents citing the scholarly output published by a “selected entity”</td>
</tr>
<tr>
<td>Patent-Cited Scholarly Output</td>
<td>Count of scholarly outputs by a “selected entity” that have been cited in patents</td>
</tr>
<tr>
<td>Patent-Citations Count</td>
<td>Count of patent citations received by a “selected entity”</td>
</tr>
<tr>
<td>Patent-Citations per Scholarly Output</td>
<td>Average patent-citations received per 1,000 scholarly outputs published by a “selected entity”</td>
</tr>
</tbody>
</table>
1.5 What is SciVal coverage and scope?

Coverage & Scope:

- **Patents** that have cited scholarly output
- Patents from **5 of the largest patent offices**:
  - EPO (European patent office)
  - USPTO (US patent office)
  - UK IPO (UK intellectual property office)
  - JPO (Japan patent office)
  - WIPO (World Intellectual Property Organization)

- All patents **independent of their status** (application, grant or rejection)

Keep in Mind:

- SciVal shows **potential of knowledge transfer** to industry but **NOT** whether research is actually commercialized nor by whom
- Due to **~18 months time-lag** between patent application and publication, scientific papers published in this period are less likely to get cited by patents

1.6 Summary & Further Reading

Summary:

• Patents protect inventions that are novel, inventive and industrially applicable
• All patent related information (i.e. inventor and owner details, technology fields, technical description, etc.) is publically available
• Patent application is published ~18 months after the application date
• Patents, like scientific papers, contain references to other patents and/or scholarly output
• Patent citations referencing scholarly output serve as an additional indicator to analyze research impact as well as see potential of knowledge transfer to industry
• SciVal metrics look at different angles at citations from patents to scholarly output
• In order to make meaningful analysis it is important to select comparable institutions / entities for benchmarking. One needs to keep in mind that citation practices differ from patent office to patent office, while technical specialization focus might also impact the number of citations. It would be optimal to compare institutions / entities of similar size, similar technical focus and located within the same region

Further Reading

• WIPO (World Intellectual Property Organization)

  PDF version downloadable here
2. Scopus views data
2.1 Scopus views data

In February 2015 we launched the **Trends module** and with it the introduction of views (usage) data - the first new data added to SciVal over and above the regular citation and publication data.

- Scopus views data now available throughout SciVal

- **Get an early indication of interest by other researchers** (i.e. Scopus users)

- A broader basket of metric means a more comprehensive picture of research performance, to…
  - evaluate your institution’s research
  - showcase your institution’s research to others
2.2 Understanding current interest in science

- See views metrics for researchers, institutions, countries and groups
- Benchmark them against each other to get an indication of their research visibility
- Take subject area differences into account with the Field-Weighted View Impact.
Other enhancements
3. Creating departmental structure in SciVal has never been so quick!

2 distinct use cases:
1. “I want to create a group and go for optimal precision” (launched Sept 2015)
2. “I want to create a group very quickly and go for the ‘big picture’”

Don’t refine the researcher’s profile, but add its most prominent Scopus Author Profile to the group.
4. Investing in the future – moving to the cloud

• We’re investing in the future of the platform and have moved SciVal’s computing power (HPCC Systems) to the Amazon cloud (AWS).

• You may notice that some of the processor heavy graphics (the keyphrase analysis and collaboration maps) load a little faster.

This will ensure that now and in the future, no matter how many users we have, how many new data source and metrics are added, SciVal will continue to be fast, responsive and a joy to use.
Demo
Amberyn Thomas
Associate Director, Scholarly Communication and Digitization Services
University of Queensland
SciVal Patent Data: what can we learn?

Dr Amberyn Thomas
University of Queensland Library
Australia
UQ at a glance...

Research-intensive
• 6 faculties
• 9 research institutes

50,836 students
• Postgraduates >13,800

Staff (FTE)
• Academic >2,830

Top 3 programs by enrolment
• Doctor of Philosophy
• Bachelor of Arts
• Bachelor of Science

University of Queensland
Brisbane, Queensland, Australia
founded 1909

✓ One of the top 50 universities globally
Many countries have research evaluation programs


Research impact beyond the scholarly:

- UK 2014 REF included “impact case studies”
- Excellence in Innovation for Australia – national research impact trial in 2012
  - National Innovation and Science Agenda (Dec 2015) includes the introduction of a national impact and engagement assessment – “benefits flowing from university research”

Impact ‘locally’ – within UQ there is keen focus on research quality & broader impact, including understanding innovation processes and industry engagement
Universities contribute to economic growth not only through teaching and research, but through engagement and collaborations with industry…

One way of measuring the economic effects of these activities is to examine patent data

The SciVal “Economic Impact” data is a view of the scholarly literature indexed in Scopus which is referenced in the patents from the included Patent Offices.

SciVal data provides insight into how a set of Scopus publications have supported industry (as measured by their citations in patents), but does not give the user information to understand the context and quality of the cited patents.

Patent data = number of patents + patent citations

Patent citations refer to both patent and scholarly literature cited in patents
27/297 publications are cited: 9%

Patent citation rate per 1000:

\[(32/297) \times 1000 = 107.7\]

Is 9% “good”? How does 107.7 as a patent citation rate per 1000 publications compare with others?
If rates are higher, does this mean that the authors of the papers are better at identifying the innovation in their research than others?

Does it mean their university has better internal processes for identifying innovation and filing for patents?

Or does it mean that someone somewhere else has identified the possibilities within the research?

Would not the patent citation rates be also dependent on how complete and comprehensive is the citations dataset? Do we have such information?

Without the underlying patent data, many questions remain…

Need to know:
- Context of the cited patents
- Inventors, Owners and Applicants
- Cited authors and papers etc.

https://www.lens.org/lens/
Thank you
Thank you for your participation.

Questions?
5. Get instant access to 7500 institutions in SciVal

- During the last few weeks we added almost 1000 new institutions in SciVal, in the following sectors:
  - 311 new corporate institutions
  - 465 new academic institutions
  - 129 new hospitals
  - 40 new governmental institutions
  - 25 new miscellanea institutions (non-governmental, funding bodies etc.)

- And improved the mapping of existing institutions too!
  - 2500 new affiliations added

💡
- Improved representation when benchmarking your institution against others
- Academic-corporate collaboration metric more accurate
- Collaboration analysis further strengthen
8. Additional enhancements

• Improved selection of data source-types & journal classifications;
  - Easily change source-types and journal classifications via the links in the modules’ header

• Analysis of up to 200 researchers in Benchmarking;
  - Analyse the research output of a broader set of researchers (all the researchers in a department)

• Redesign of collaboration modal window
  - Compare at a glance the research outputs of current and potential collaborations with the broader basket of metrics

• Terminology alignment with Scopus
  - "Journal" and "Journal category" have been replaced with "Scopus Source" and "Subject area" (also to support disambiguation of books, later in 2016)

• Optimized search in MySciVal
  - Effortlessly search in nested groups (e.g. search departments by the researchers name included in that group of researchers) and assigned tags.