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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

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 publicly

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

Majority of citations

- Idea
- R&D
- improvements

Application 18 months Publication

Citations by patent applicant Citations by patent offices

Grant / Rejection Max 20 years

Technical fields with most applications (EPO) in 2014

- Pharmaceuticals
- Engine, pumps and turbines
- Biotechnology
- Organic fine chemistry
- Measurement
- Transport
- Computer technology
- Digital communication
- Electrical machinery...
- Medical technology

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 deep-diving 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 publicly 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
Michelle Hutnik
Science Analyst for the Office of the Vice President
Penn State University
SciVal at Penn State

- Penn State acquired access to SciVal in July 2015
  - Benchmark our institution vs. peer universities
  - Investigate current and potential collaborations
  - Showcase research at Penn State

Penn State has 20,000+ authors listed in SciVal
Examples of SciVal projects at Penn State

• Showcase the number of Penn State’s global collaborations in the strategic plan

• Track the scholarly activity of a group of researchers over time for large federal grants

• Locate potential collaborators in Africa who are doing research in the field of ‘Education and Technology’

• Find institutions with potential synergistic research strengths

• Benchmark Penn State research
Use the Competencies Tab in the Overview Module to find institutions with potential synergistic research strengths.

Both Penn State and the University of Leeds are leaders in GIS / Spatial Data.
Use the Trends Module to benchmark Penn State in various different areas of research
In the Benchmarking Module use Timeline, Scholarly Output, Citation Count, and View Count

Track progress over time
Use Patent Citation Count in Benchmarking Module:

Over time, our patent citation count has also increased.
Use Views in Collaborations Module:

Collaboration by Pennsylvania State University

Institutions collaborating with Pennsylvania State University

<table>
<thead>
<tr>
<th>Institution</th>
<th>Co-authored publications</th>
<th>Co-authors at Pennsylvania State University</th>
<th>Co-authors at the other Institution</th>
<th>Citations per Pu...</th>
<th>Views per Publication</th>
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</thead>
<tbody>
<tr>
<td>University of California at Santa Barbara</td>
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<td>10</td>
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<tr>
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<td>11.4</td>
<td>67.1</td>
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</tbody>
</table>

Collaboration by Pennsylvania State University

Institutions not yet collaborating with Pennsylvania State University

<table>
<thead>
<tr>
<th>Institution</th>
<th>Publications</th>
<th>Authors</th>
<th>Citations per Pu...</th>
<th>Views per Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington State University Tri-Cities</td>
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<tr>
<td>Microsoft USA</td>
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<tr>
<td>Procter and Gamble</td>
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<td>71</td>
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<tr>
<td>National Science Foundation</td>
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<td>30.5</td>
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<td>California State University Long Beach</td>
<td>93</td>
<td>70</td>
<td>3.5</td>
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<tr>
<td>Exponent, Inc.</td>
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<td>University of Wisconsin-Milwaukee</td>
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</tr>
</tbody>
</table>
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.