



SciVal intro and data sources

SciVal Advisor Program
Autumn 2020 edition, session 1

9th November 2020

Kate Patyrak, Bartłomiej Wieckowski





Q&A



Chat



Raise Hand

Q&A



Welcome 🍌

Feel free to ask the host and panelists questions

Type your question here...



Zoom Group Chat

To: All panelists and attendees
Type message here ...



Q&A



Chat



Raise Hand



ELSEVIER

ON AIR



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Today's agenda

- Let's get to know each other!
- Introduction to SciVal Advisor program autumn 2020
- SciVal – how to start with it?
- Why it is a useful tool?
- The practical point of view - use cases
- Metrics – how to work with it?
- Summary and Q&A

Welcome!



Kate Patyrak

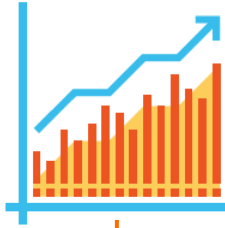


Bartek Wieckowski

SciVal advisor program autumn 2020 edition

- Participate at least at 4 live webinars
- Complete an online assessment test:
 - Till 31st December 2020,
 - Get minimum 50% of points.

Why research metrics can be important



Analyze the strengths of research at the institution



Determine where research is a good potential investment



Demonstrate Return on Investment of research money



Identify rising stars amongst the early career researchers



Tell a better narrative about everything that is happening with research

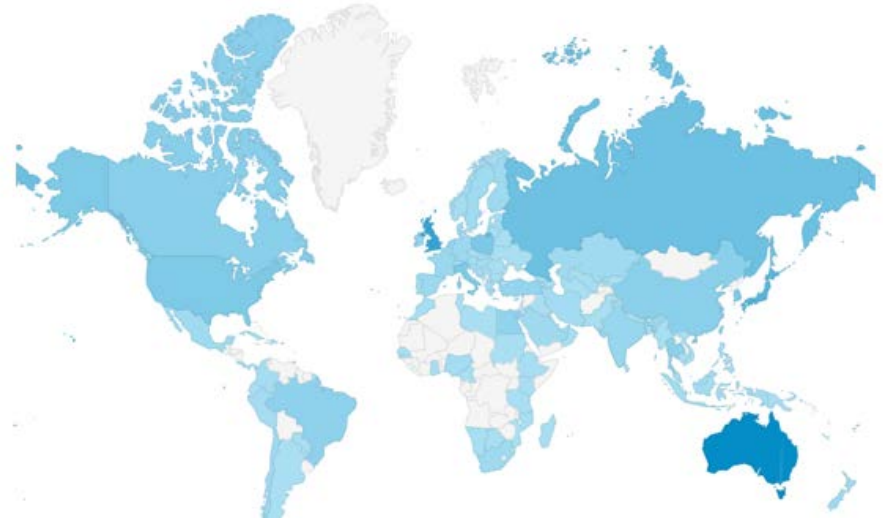
SciVal's key differentiators

SciVal's key differentiators

1. Unparalleled power and flexibility with an intuitive interface
2. Based on the largest, curated databases in the world, Scopus ®
3. Access to the research performance of thousands of global research institutions and their associated researchers
4. Access to an array of simple and more sophisticated metrics allowing the creation of uniquely tailored analyses and analytical reports
5. Analysis and scenario modeling for any researcher or group in the world, based on full publication history (thanks to our Scopus Author Profiles!)

SciVal today

- Global market leader with more than **1,300 customers**, across **80 countries**.
Predominantly academic institutions.
- Very strong presence in **Australia, UK, Japan, China and Russia**
- **Corporate customers** include: Siemens, Boeing
- Several **funding organizations** and **national government bodies**



1.  Australia

2.  United Kingdom

3.  Japan

4.  Poland

5.  Italy

6.  Russia

7.  United States

8.  South Korea

9.  Brazil

10.  Taiwan

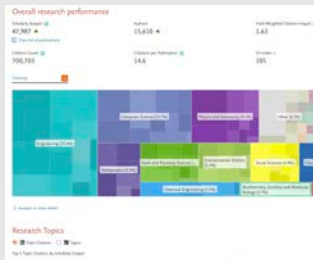
SciVal in a nutshell

SciVal provides access to the research performance of over 18,500 research institutions and their associated researchers from more than 230 nations worldwide



Visualize research performance

Ready-made-at a glance snapshots of any selected entity



Benchmark your progress

Flexibility to create and compare any research groups



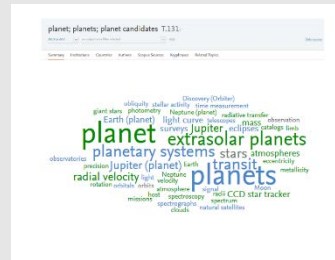
Develop collaborative partnerships

Identify and analyze existing and potential collaboration opportunities

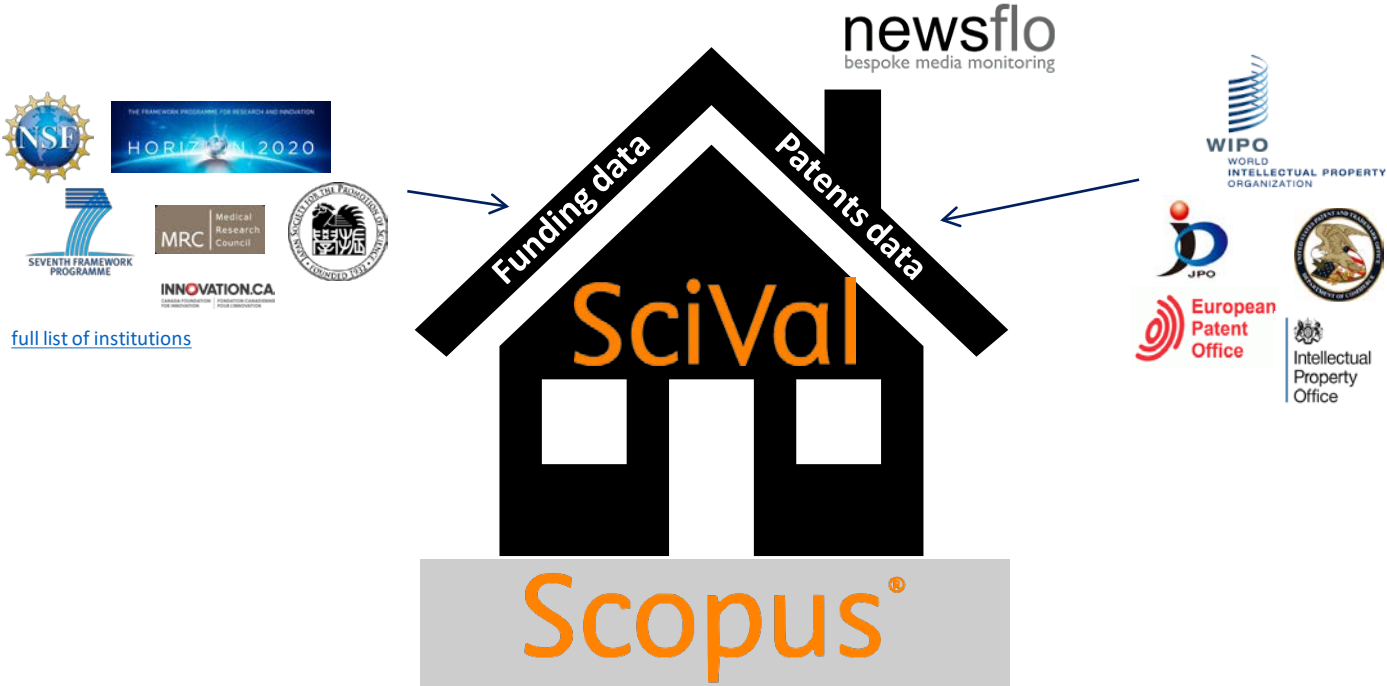


Analyze research trends

Analyze research trends to discover the top performers and rising stars

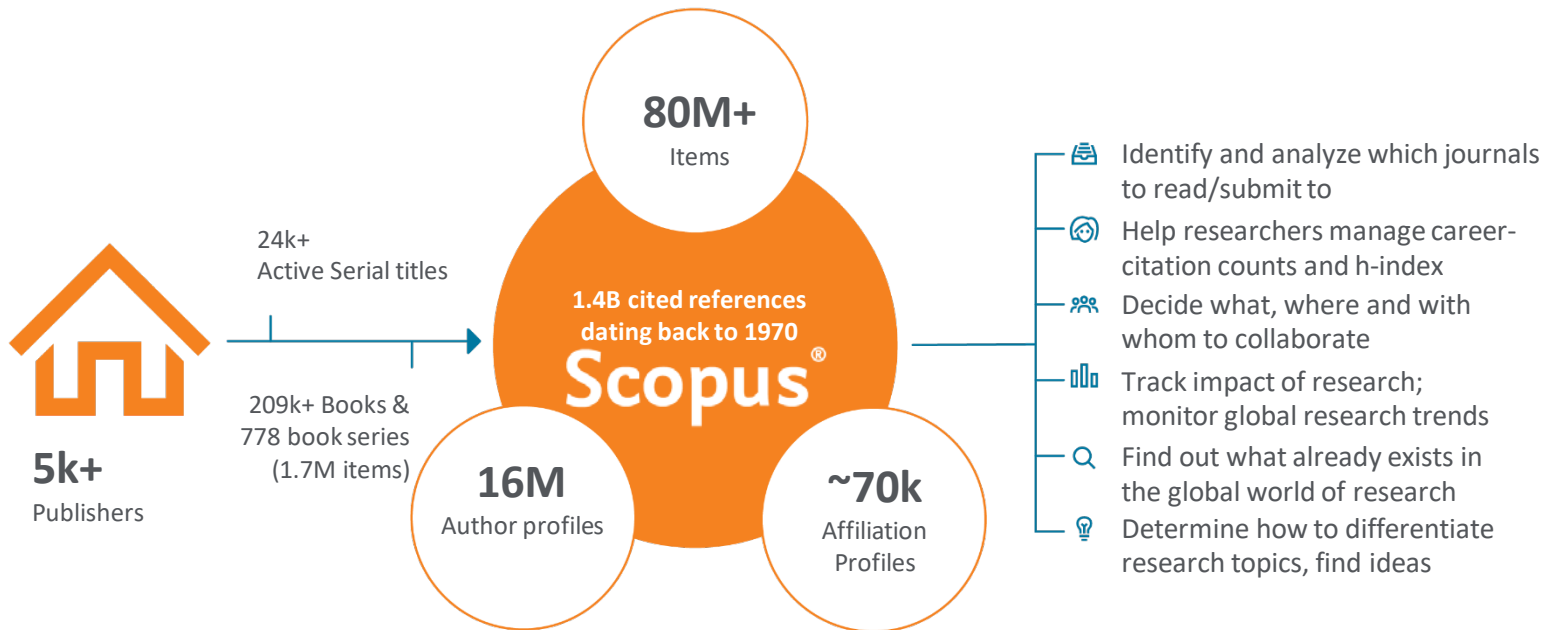


Which Data Sources Feed Into SciVal?



Scopus: the main data source for SciVal

Scopus is one of the largest curated abstract and citation databases of peer-reviewed literature, and features smart tools that allow you to track, analyze and visualize scholarly research.



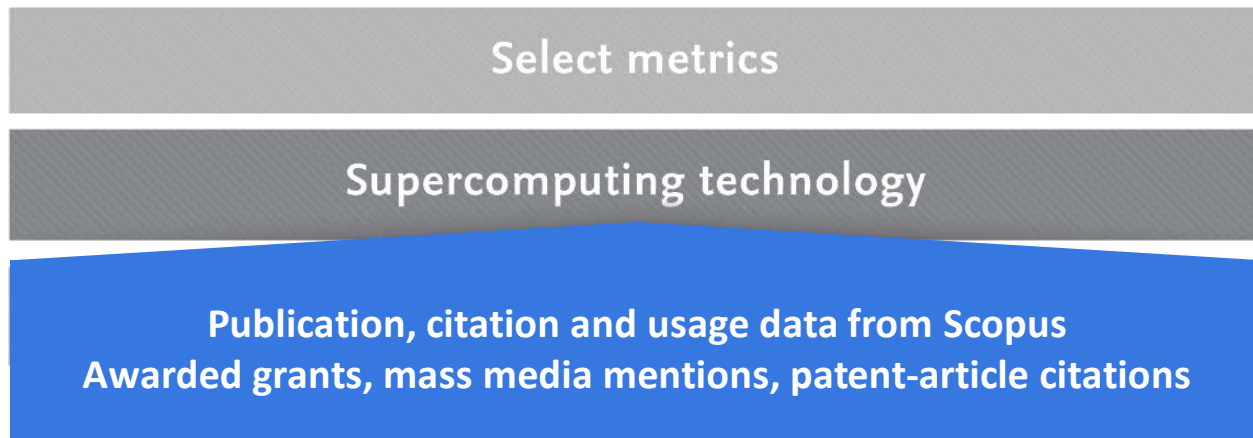
The layers of SciVal

Publication, citation and usage data from Scopus
Awarded grants, mass media mentions, patent-article citations

The layers of SciVal



The layers of SciVal



The layers of SciVal

**+18,500 institutions
from 231 nations**

Around 96,000 Topics

Create and select research entities

+16m active authors

Research Areas

Select metrics

Supercomputing technology

Publication, citation and usage data from Scopus
Awarded grants, mass media mentions, patent-article citations

The layers of SciVal

Reports



Overview



Benchmarking



Collaboration



Trends

Create and select research entities

Select metrics

Supercomputing technology

Publication, citation and usage data from Scopus
Awarded grants, mass media mentions, patent-article citations

Benefits for a broad range of users

SciVal supports the needs of a broad range of institutional users by providing ready-made, at-a-glance snapshots for flexible, institution-specific insight



Vice-Rector for Research

- Comprehensive Performance Overview to inform strategic planning
- Identify institution's strengths and short-comings



Research Office

- Create management-level reports
- Accelerate institutional and cross-institutional collaboration
- Support and win large grants



Heads of Department

- Evaluate researcher and team performance for partnership planning, recruitment and retention decisions
- Scenario modelling through creating virtual teams



Faculty and Researchers

- Raise visibility and highlight expertise and achievements
- Expand networks
- Locate and evaluate potential collaborators and mentors

Some questions addressed using SciVal

“How can we demonstrate excellence in a way that best shows our unique strengths to secure funding and attract the best talent?”



“I want to explore the various scenarios I’m considering to set up a centre of excellence. How can the data provide me with insights?”



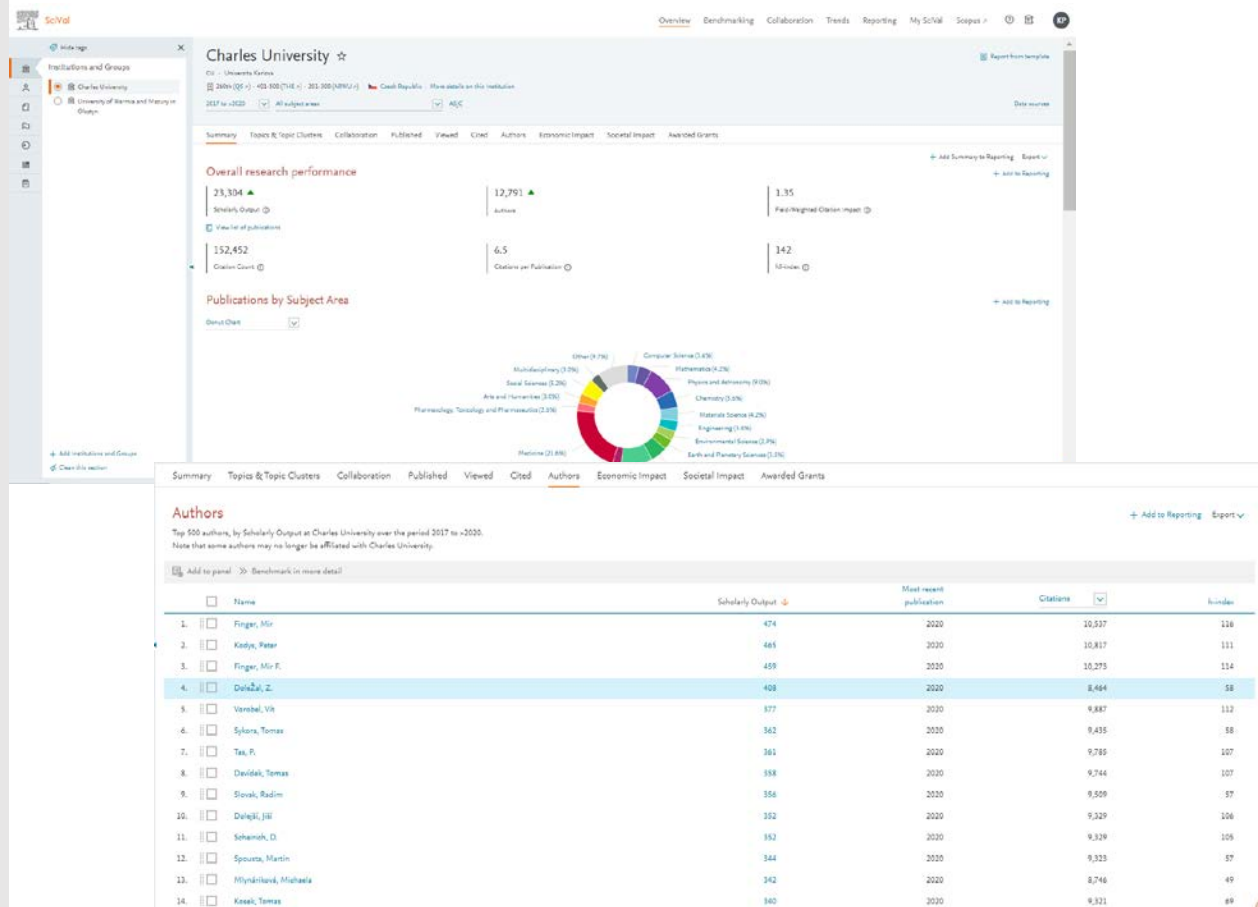
“My VC is going to India; who do our academics collaborate with there and how can we potentially develop greater partnerships?”



“How can I see who’s excelling in a specific subject for potential collaboration or partnership opportunities?”

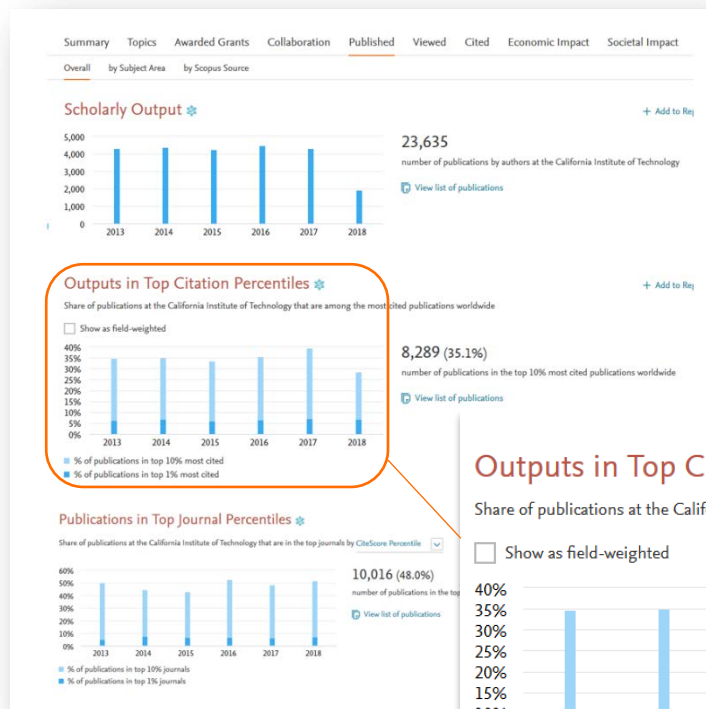


“How can we demonstrate excellence in a way that best shows our unique strengths to secure funding and attract students?”

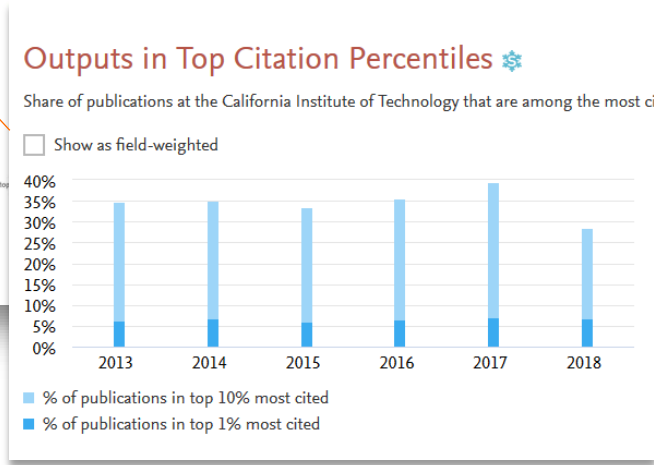


View the disciplinary focus of your institutions and your top researchers

Look through different metrics to identify ones that demonstrates your institution's research excellence



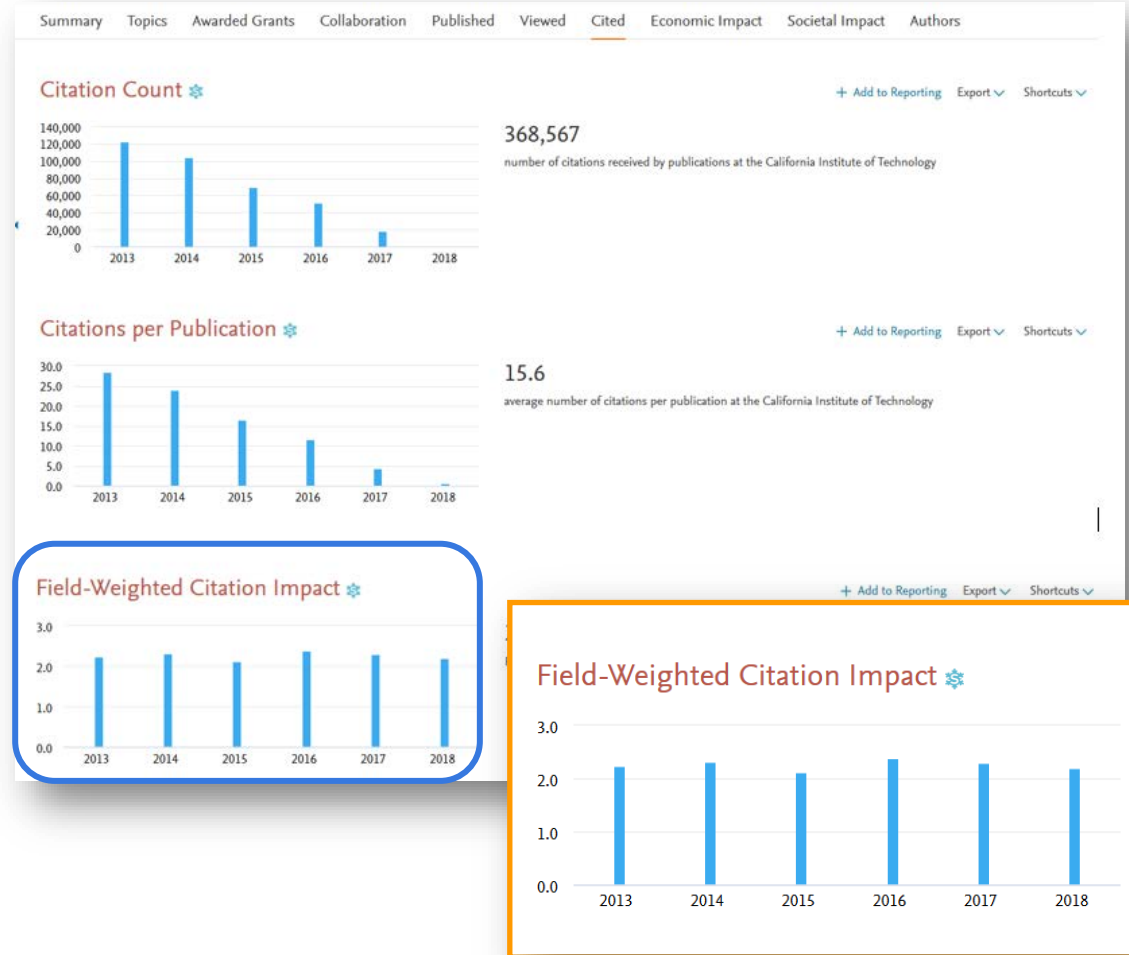
2017
7.1% in top 1% most cited
39.6% in top 10% most cited



See how many of your publications fall into the top 1% and 10% of the most cited articles in the world

Look through different metrics to identify ones that demonstrates your institution's research excellence

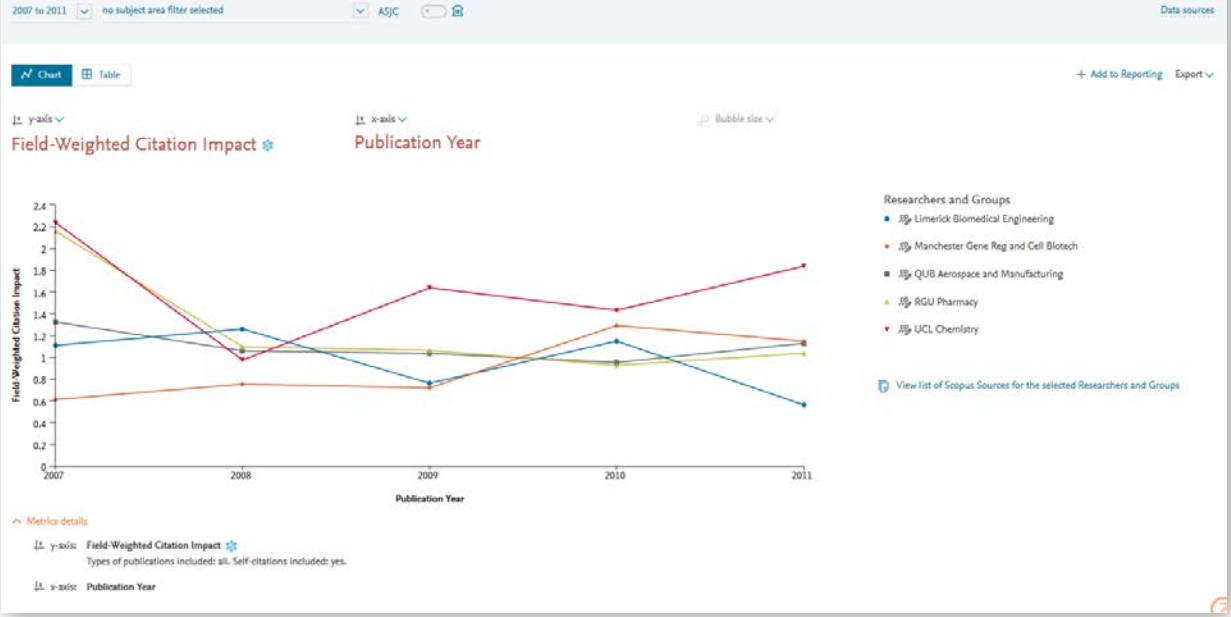
View Field-Weighted Citation Impact that normalizes citation behavior for differences in size, field and publication-type



“I want to explore the various scenarios I’m considering to set up a centre of excellence. How can the data provide me with insights?”



Benchmarking



Test scenario by creating virtual teams and compare using multiple metrics

“My VC is going to China; who do our academics collaborate with there and how can we expand?”



Institutions collaborating with Charles University

Worldwide All countries/regions All sectors All authors

5,400 collaborating institutions 16,698 co-authored publications

Table Map

Co-authored publications per country/region:



4 collaborating Institutions

Top 10 institutions worldwide by co-authored publications



Drill into the map to identify your collaboration partners in China

Identify existing and potential collaboration partners

Current collaboration Potential collaboration












Institutions collaborating with Charles University

Worldwide All countries/regions All sectors All authors

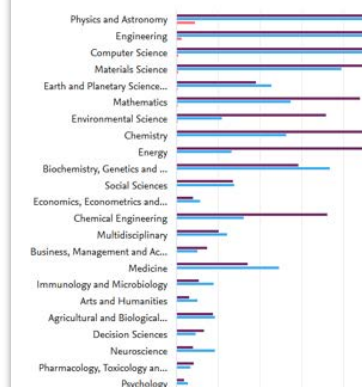
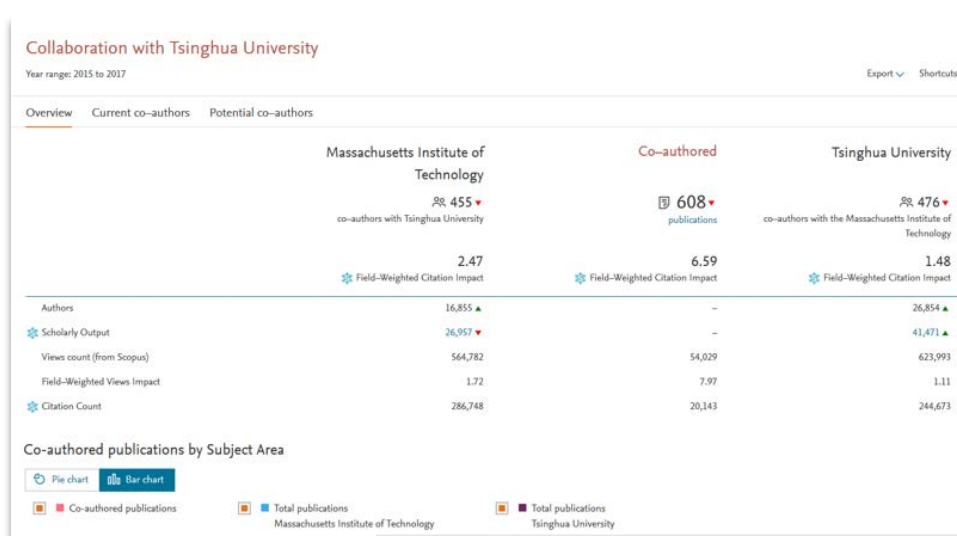
5,400 collaborating institutions 16,698 co-authored publications

Table Map

+ Add to Reporting Export Shortcuts Find institution

Institution	Co-authored publications	Co-authors at Charles University	Co-authors at the other institution	Field-Weighted Citation Impact	Field-Weighted Views Impact
 Czech Academy of Sciences	4,375 ▲	3,663 ▲	4,234 ▲	1.45	2.89
 CNRS	1,635 ▲	694 ▲	2,046 ▲	3.73	9.97
 Université Paris-Saclay	1,297 ▲	345 ▲	828 ▼	4.20	12.15
 Czech Technical University in Prague	1,176 ▲	948 ▲	714 ▲	1.87	5.98
 Masaryk University	1,125 ▲	1,701 ▲	1,241 ▲	1.03	1.87
 CSIC	1,109 ▲	364 ▲	667 ▲	4.11	13.20
 National Institute for Nuclear Physics	1,079 ▼	137 ▼	2,261 ▼	3.50	13.54
 National and Kapodistrian University of Athens	1,039 ▲	254 ▲	257 ▲	4.21	13.83
 University of Bologna	1,024 ▲	266 ▲	325 ▲	4.46	14.38
 Universidad Autónoma de Madrid	1,004 ▲	256 ▲	231 ▲	4.71	14.81
 CEA	993 ▼	179 ▼	357 ▼	3.97	14.28
 University of Rome La Sapienza	992	267	384 ▼	4.19	14.49
 Institut national de physique nucléaire et de physique des particules	990 ▲	102 ▲	1,099 ▼	3.73	14.57

Assess the activity level and identify researchers



Collaboration with Tsinghua University

Year range: 2015 to 2017

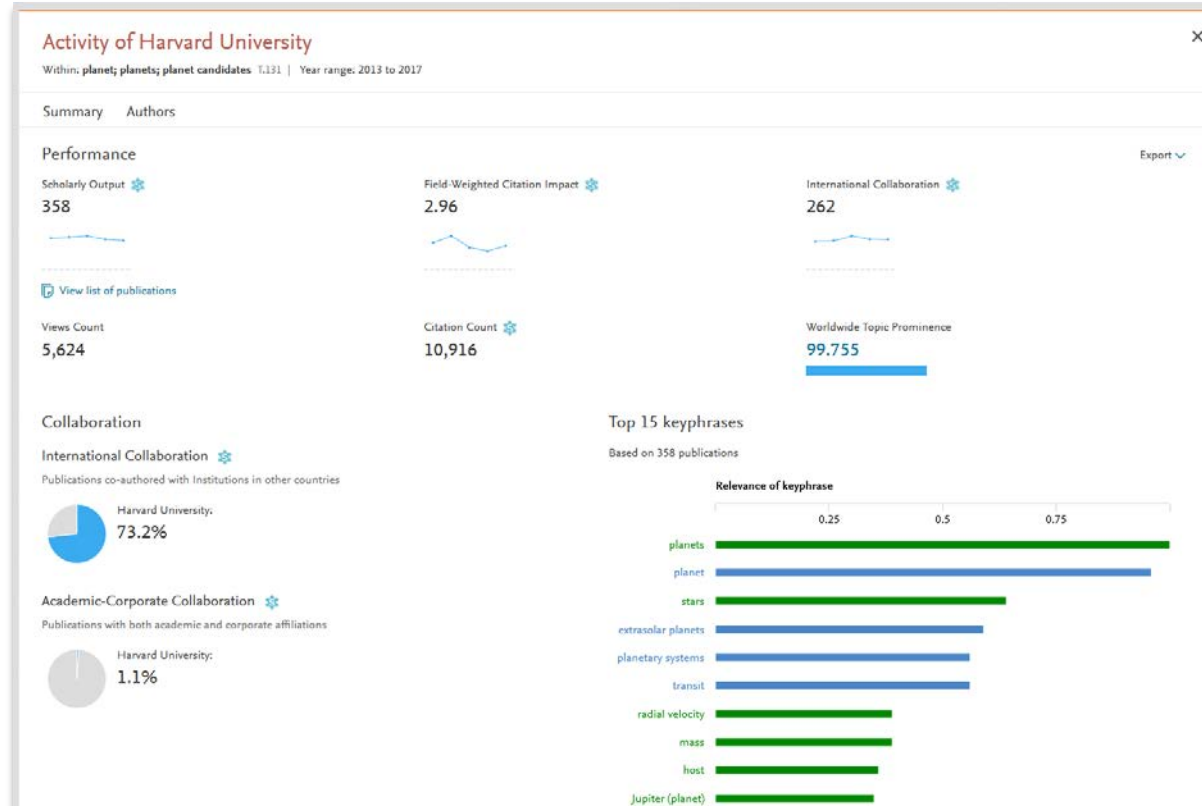
Export Shortcuts

Overview Current co-authors Potential co-authors

Add to panel

Massachusetts Institute of Technology			Tsinghua University		
Co-authors with Tsinghua University			Co-authors with the Massachusetts Institute of Technology		
Author	Co-authored publications	Citations	Author	Co-authored publications	Citations
> Iken, Phillip H.	180	2,745	> Guo, Y. S.	179	2,595
> Williams, Michael P.	150	2,081	> Yang, Zhenwei	178	2,595
> Taylor, Frank E.	129	3,946	> Zhang, Liming M.	170	2,214
> Boettcher, Tom	82	593	> An, Liugan	140	2,436
> Aggawal, Nancy	62	7,846	> Liu, Xiao Hai	139	1,784
> Barotti, Lisa	62	7,846	> Chen, X.	132	4,283
> Donovan, Fred	62	7,846	> Zhang, Liang	98	2,152
> Esick, Reed C.	62	7,846	> Zhang, Yanai	95	1,957
> Evans, Matthew A.	62	7,846	> Zhu, Xiangfei	83	634
> Fritschel, Peter K.	62	7,846	> Jing, F. F.	72	1,819
> Gra, Slawomir	62	7,846	> Jiang, F.	66	432
> Katsavounidis, Erotokritos	62	7,846	> Guo, Xiangyu	60	7,696
> MacInnis, Myron	62	7,846	> Cao, J.	60	7,624
> Moon, Kun	62	7,846	> Guo, Yifeng	60	7,771

Analyze all or a specific part of the Research Area



Choose a specific key phrase within the Research Area, then view the performance of the top institutions, countries, authors and journals and compare them to your institution for potential synergies

Research Metrics in SciVal



Metrics available in SciVal by metric theme

Published

- Scholarly Output
- Subject Area Count
- Scopus Source Title Count
- h-indices

Economic Impact

- Academic-Corporate Collaboration
- Academic-Corporate Collaboration Impact
- Citing-Patents Count
- Patent-Cited Scholarly Output
- Patent-Citations Count
- Patent-Citations per Scholarly Output

Cited

- Citation Count
- Field-Weighted Citation Impact
- Outputs in Top Citation Percentiles
- Publications in Journal Quartiles
- Publications in Top Journal Percentiles
- Citations per Publication
- Cited Publications
- h-indices
- Number of Citing Countries
- Collaboration Impact
- Academic-Corporate Collaboration Impact
- Citing-Patents Count
- Patent-Cited Scholarly Output
- Patent-Citations Count
- Patent-Citations per Scholarly Output

Collaboration

- Collaboration
- Collaboration Impact
- Academic-Corporate Collaboration
- Academic-Corporate Collaboration Impact

Viewed

- Views Count
- Outputs in Top Views Percentiles
- Views per Publication
- Field-Weighted Views Impact

Societal Impact

- Mass Media
- Media Exposure
- Field-Weighted Mass Media

Awarded Grants

- Awards Volume

Publication Year

available over 30 metrics

Two Golden Rules for using research metrics

Always use both qualitative and quantitative input into your decisions

Benefit from the strengths of both approaches. Don't replace one with the other

Combining both approaches = **closer to the whole story**

Valuable intelligence comes when these approaches **show different messages**

Always use more than one research metric as the quantitative input






























One metric's strengths can **complement** the weaknesses of others

There are many different ways of being excellent

Using multiple metrics drives desirable changes in behaviour (harder to game)

Metrics available in SciVal in other themes

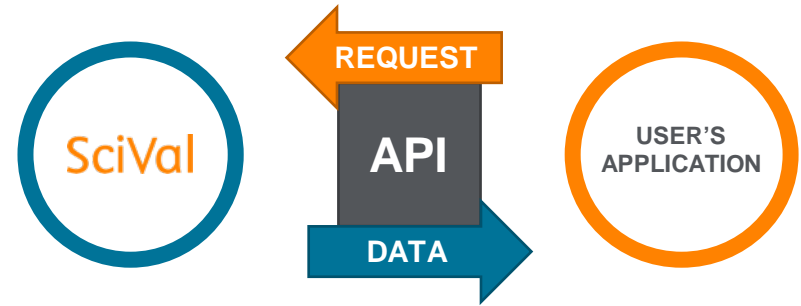
F. Qualitative input

Metric theme	Metric sub-theme	Metrics in SciVal		
A. Funding	Awards	<ul style="list-style-type: none"> Awards Volume 		
B. Outputs	Productivity of research outputs	<ul style="list-style-type: none"> Scholarly Output  <ul style="list-style-type: none"> Number, Type and Growth Subject Area Count 		
	Visibility of communication channels	<ul style="list-style-type: none"> Publications in Top Journal Percentiles  		
C. Research Impact	Research influence	<table border="0"> <tr> <td> <ul style="list-style-type: none"> Citations Count  Field-Weighted Citation Impact  Outputs in Top Citations Percentiles  Citations per publication  Cited publications <i>h</i>-indices  </td> <td> <ul style="list-style-type: none"> Number of citing countries Views Count Outputs in Top Views Percentiles Views per Publication Field-Weighted Views Impact </td> </tr> </table>	<ul style="list-style-type: none"> Citations Count  Field-Weighted Citation Impact  Outputs in Top Citations Percentiles  Citations per publication  Cited publications <i>h</i>-indices  	<ul style="list-style-type: none"> Number of citing countries Views Count Outputs in Top Views Percentiles Views per Publication Field-Weighted Views Impact
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Knowledge transfer	<ul style="list-style-type: none"> Academic-Corporate Collaboration  Citing-Patents Count Patent-Cited Count 			
D. Engagement	Academic network	<ul style="list-style-type: none"> Collaboration  Collaboration Impact  		
	Non-academic network	<ul style="list-style-type: none"> Academic-Corporate Collaboration  Academic-Corporate Collaboration Impact  		
	Expertise transfer	<ul style="list-style-type: none"> Academic-Corporate Collaboration  Citing-Patents Count Patent-Cited Count 		
E. Societal Impact	Societal Impact	<table border="0"> <tr> <td> <ul style="list-style-type: none"> Academic-Corporate Collaboration  Citing-Patents Count Patent-Cited Scholarly Output </td> <td> <ul style="list-style-type: none"> Patent-Citations Count Mass Media  Media Exposure Field-Weighted Mass Media </td> </tr> </table>	<ul style="list-style-type: none"> Academic-Corporate Collaboration  Citing-Patents Count Patent-Cited Scholarly Output 	<ul style="list-style-type: none"> Patent-Citations Count Mass Media  Media Exposure Field-Weighted Mass Media
<ul style="list-style-type: none"> Academic-Corporate Collaboration  Citing-Patents Count Patent-Cited Scholarly Output 	<ul style="list-style-type: none"> Patent-Citations Count Mass Media  Media Exposure Field-Weighted Mass Media 			

Metrics for Use in Your Own Applications

Feed metrics to:

- Internal warehouse systems
- CRIS' like Pure
- Reporting systems like Tableau
- Push university **organizational structure** from Pure to SciVal.

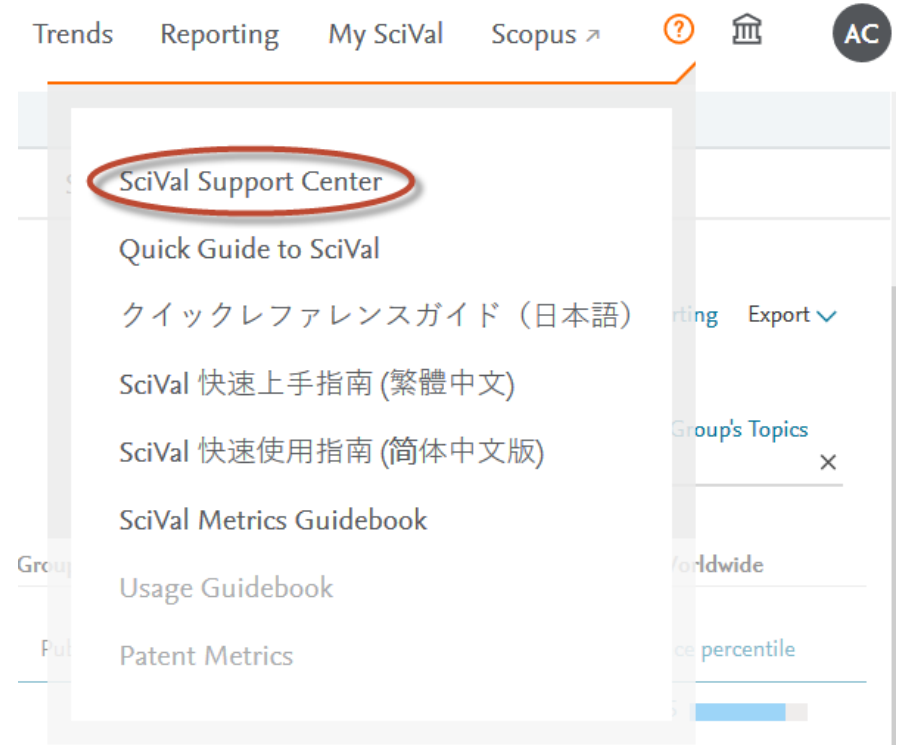


**More CRIS system support to follow*

Getting help

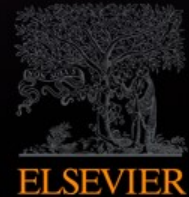
The spine menu provides links to additional help documentation

<https://service.elsevier.com/app/home/supporthub/scival/>



Q&A session

Empowering
Knowledge™



Next sessions

1. SciVal intro and data sources
2. Visualize research performance - the Overview module
3. Benchmark your progress!
4. Reports - how to use templates?
5. Develop collaborative partnerships and analyze research trends
6. Entities in SciVal - Institutions and Countries
7. Entities in SciVal - Researchers and Publication Sets
8. Entities in SciVal - Topics, Research Areas and Journals



Thank you

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