

SciVal overview

Guillaume Warnan | Customer Consultant, Research Intelligence

Floortje Flipppo | Solution Sales Manager, Research Intelligence

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Elsevier Research Intelligence

SciVal

Pure

Analytical
Services

Scopus

Mendeley

External view

Internal view

**Custom
analysis**

**Rich data
assets**

**Researcher
productivity**

Ready-to-use tools to analyze the world of research, and to establish, execute and evaluate optimized strategies for the research organization.

Comprehensive research information management system to enable evidence-based decisions, promote collaboration, simplify administration and optimize impact.

Customized analysis, reports and services to meet your research management needs.

The largest abstract and citation database of peer-reviewed literature; the broadest source of global scientific research. Includes content from 5,000 publishers with tools to easily track, analyze and visualize research.

A free reference manager and academic social network that can help researchers organize and discover the latest research, collaborate with others online, and see meaningful trends in global research activity.

← Informs research strategy →

← Supports research activity →

Make decisions by “triangulating” information sources



Scopus – The data source

About Scopus®

- The **largest** abstract and citation database of research information with over **53 million** records
- Updated daily, includes:
 - **21,900+ titles** from more than **5,000 international** publishers (independent review board)
 - **20,000+ peer-reviewed journals** (including 2,800 open access journals)
 - **367 trade publications**
 - **421 book series**
 - **30,000 books** (75,000 by 2015)
 - **5.5 million conference papers**
 - **"Articles-in-Press"** from more than **3,750 journals** and publishers
- Coverage of:
 - Life Sciences
 - Health Sciences
 - Physical Sciences
 - Social Sciences
 - Arts and Humanities
- Cited Reference expansion of pre-1996 references (back to **1970** by 2016)
- Independent journal metrics:
 - **SNIP**: The Source-Normalized Impact per Paper
 - **SJR**: The SCImago Journal Rank
 - **IPP**: The impact per Paper
- Connectivity with ORCID



Scopus

What content does Scopus include?

Physical Sciences 6,600	JOURNALS 21,912 peer-reviewed journals 367 trade journals <ul style="list-style-type: none">- Full metadata, abstracts and cited references (pre-1996)- >2,800 fully Open Access titles- Going back to 1823- Funding data from acknowledgements	CONFERENCES 17k events 5.5M records (10%) Conf. expansion: 1,000 conferences 6,000 conf. events 400k conf. papers 5M citations Mainly Engineering and Physical Sciences	BOOKS 421 book series - 28K Volumes - 925K items 29,917 books - 311K items Books expansion: 75K books by 2015 - Focus on Social Sciences and A&H	PATENTS 24M patents from 5 major patent offices
Health Sciences 6,300				
Social Sciences 6,350				
Life Sciences 4,050				

Scopus cited references expansion program

Scopus will add cited references to 8 Million pre-1996 articles going back to 1970.



Development of required systems and processes has already started

The first content with pre-1996 cited references will be visible in Q4 2014 (Elsevier & Springer)

Project will be completed by 2016 when >8M articles from all major publishers have been loaded

SciVal overview

SciVal overview

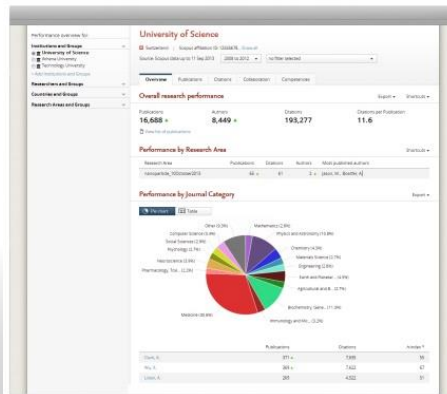
SciVal offers quick, easy access to the research performance of 220 nations and 4,600 research institutions worldwide.



Overview

Visualise research performance

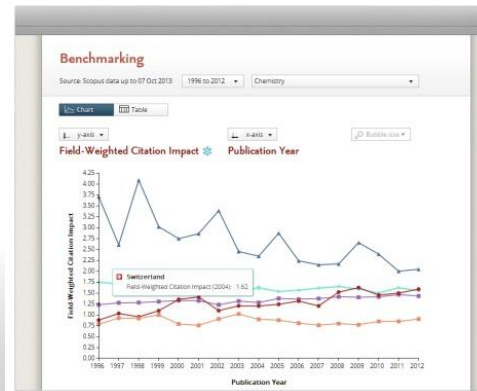
Ready-made-at a glance snapshots of any selected entity



Benchmarking

Benchmark your progress

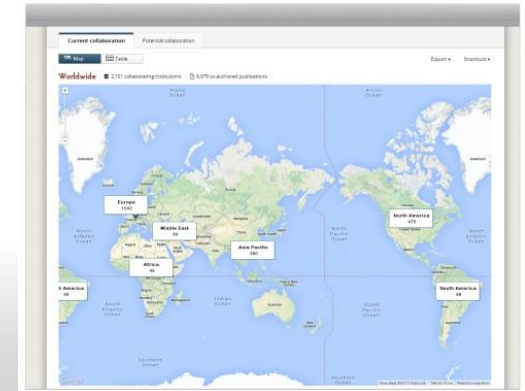
Flexibility to create and compare any research groups



Collaboration

Develop collaborative partnerships

Identify and analyze existing and potential collaboration opportunities



Key questions SciVal addresses:

Because SciVal uses advanced data analytics and super-computer technology, users can instantly configure and process enormous amounts of data, and generate on-demand data visualizations relevant to specific challenges.



University
management

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

I want to use scenarios to assess the various options I'm considering to set up a centre of excellence. Which is the best option, based on insights from the data?



Researcher

My vice chancellor is going to China. Whom do our academics collaborate with there?

I want to benchmark my institute against its peers, and my departments also want to benchmark themselves. How can we all do this effectively to suit our different circumstances?



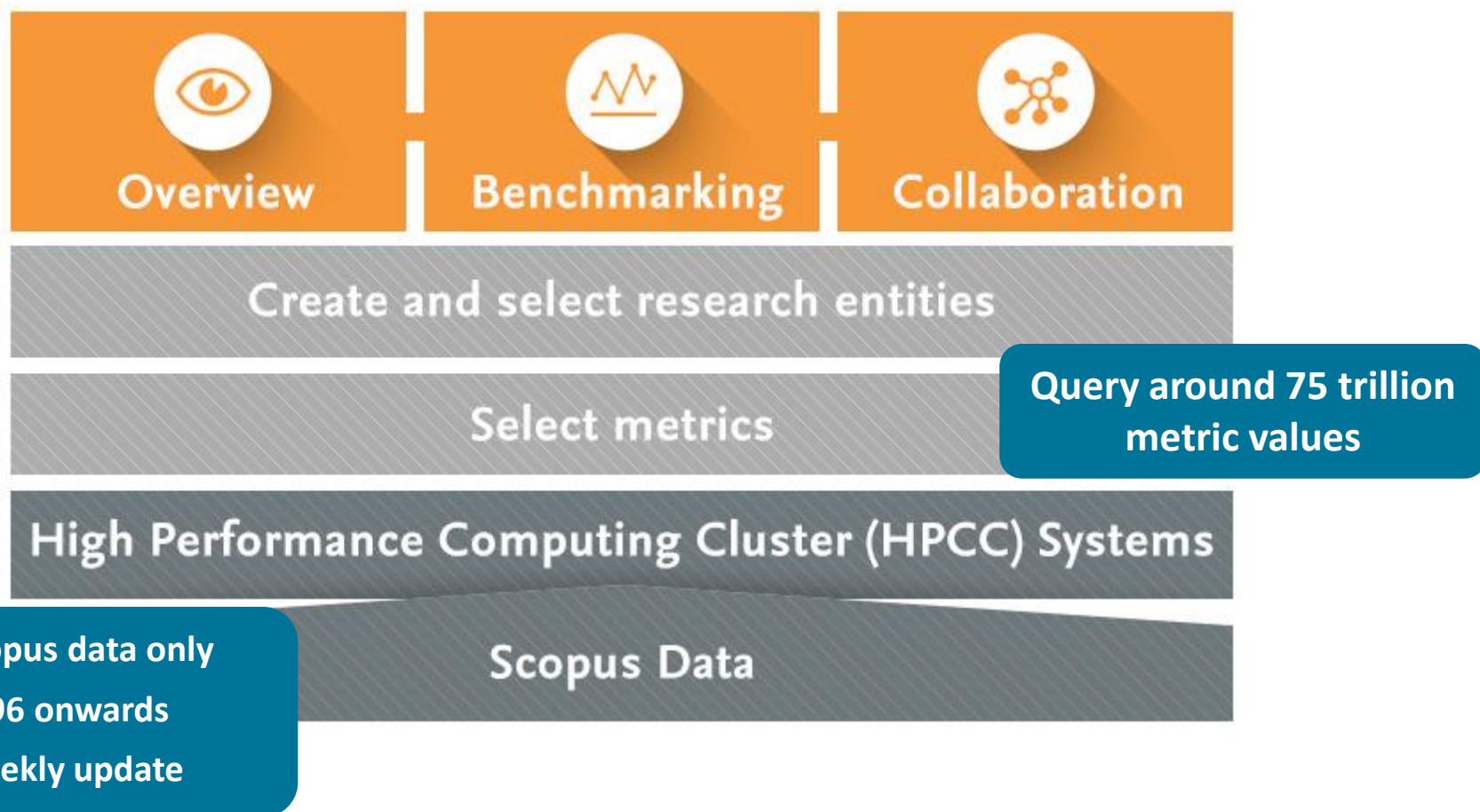
Research
administrator



Research
executive

The structure of SciVal

Using advanced data analytics technology, SciVal allows you to instantly process an enormous amount of data to generate powerful data visualizations on-demand, in seconds.



Groups of metrics in SciVal

	Productivity	Citation Impact	Collaboration	Disciplinarity	Snowball Metric	“Power metric”
Scholarly Output						
Journal Count						
Journal Category Count						
Citation Count						
Cited Publications						
Citations per Publication						
Number of Citing Countries						
Field-Weighted Citation Impact						
Collaboration						
Collaboration Impact						
Academic-Corporate Collaboration						
Academic-Corporate Collaboration Impact						
Outputs in Top Percentiles						
Publications in Top Journal Percentiles						
<i>h</i> -indices						

Broad range of metrics is essential for you to be able to address your many questions, and to play by the only rule...

SciVal Metrics Guidebook

Example 4: Number of Citing Countries

Scenario: The user would like to calculate the Number of Citing Countries of an entity that consists of 6 publications. They have not selected any viewing or calculation options. Say that this entity has received 6 citations from publications A, B, C, D, E and F.

Entity with 6 Publications					
	Publication 1	Publication 2	Publication 3	Publication 4	Publication 5
Cited by Publication A	Yes			Yes	
Cited by Publication B			Yes	Yes	
Cited by Publication C	Yes	Yes		Yes	Yes
Cited by Publication D	Yes	Yes		Yes	Yes
Cited by Publication E	Yes	Yes		Yes	Yes
Cited by Publication F		Yes		Yes	

Scenario: The citing publications A, B, C, D, E and F have the following affiliation information:

Citing Publication	Affiliation	Institution	Country
Publication A	A1	34	C1
	A2	34	C2
Publication B	A1	31	C1
	A2	32	C1
Publication C	A1	31	C1
	A2	32	C1
Publication D	A1	31	C1
	A4	31	C1
Publication E	A1	31	C1
	A2	35	C3
Publication F	A1	31	C1
	A2	36	C4
	A3	31	C1

Question: How do I calculate the number of Citing Countries?

Answer: Count the number of distinct countries in the affiliations of the citing publications.

Number of Citing Countries = 4

4.9 Metric: Field-Weighted Citation Impact

Field-Weighted Citation Impact in SciVal indicates how the number of citations received by an entity's publications compares with the average number of citations received by all other similar publications in the data universe: how do the citations received by this entity's publications compare with the world average?

• A Field-Weighted Citation Impact of 1.00 indicates that the entity's publications have been cited exactly as would be expected based on the global average for similar publications; the Field-Weighted Citation Impact of "World", or the entire Scopus database, is 1.00

• A Field-Weighted Citation Impact of more than 1.00 indicates that the entity's publications have been cited more than would be expected based on the global average for similar publications; for example, 2.11 means 111% more cited than world average

• A Field-Weighted Citation Impact of less than 1.00 indicates that the entity's publications have been cited less than would be expected based on the global average for similar publications; for example, 0.87 means 13% less cited than world average

Similar publications are those publications in the Scopus database that have the same publication year, publication type, and discipline, as represented by the Scopus journal classification system:

• Publications can be assigned to a classification system in 2 ways:

– **"Journal-driven" assignment** assumes that every publication within a journal fits within the same discipline(s) as the journal's scope. Each publication automatically adopts the subject classifications that are assigned to the journal. This method of assignment is suitable for journals that are focused in a core field, and do not tend to include publications that are also relevant to other fields

– **"Publication-driven" assignment** assumes that publications within a journal may have additional or different relevance to fields outside the core focus of the journal's scope. Publication-driven assignment offers the benefit of being able to assign individual publications from a journal separately to their relevant classifications. This is important for publications in multi-disciplinary journals

• Field-Weighted Citation Impact uses "publication-driven" assignment

• Publications are allocated to the classification Sub-category level, and can be allocated to more than 1 Sub-category. When we calculate the expected citations for similar publications, it is important that these multi-category publications do not exert too much weight; for example, if a publication P belongs to both in both parasitology and microbiology, it should not have double the influence of a publication that belongs to only one or the other Sub-category. This is accounted for in SciVal by distributing publication and citation counts equally across multiple journal categories; publication P would be counted as 0.5 publications for each of parasitology and microbiology, and its citations would be shared equally between these Sub-categories

- Understanding metrics
 - Scopus as data source
- Selection of appropriate metrics
 - What affects their values, besides performance?
- For each metric
 - Situations in which they are useful
 - When to take care and how to address shortcomings
 - Worked examples

SciVal – Some live examples

Thank you!

Guillaume Warnan | G.Warnan@elsevier.com

Floortje Flipppo | F.Flipppo@elsevier.com

For product info, please visit: www.elsevier.com/research-intelligence

Empowering Knowledge

Appendix: Examples of what SciVal can do for you?

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 chancellors of research

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



Research administrators

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



Department heads

- Evaluate researcher and team performance for recruitment and retention decisions
- Model-test scenarios by creating virtual teams



Researchers

- Raise visibility and highlight achievements
- Expand networks
- Locate collaborators and mentors

What are the questions addressed using SciVal?

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



“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 China; who do our academics collaborate with there and how can we expand?”



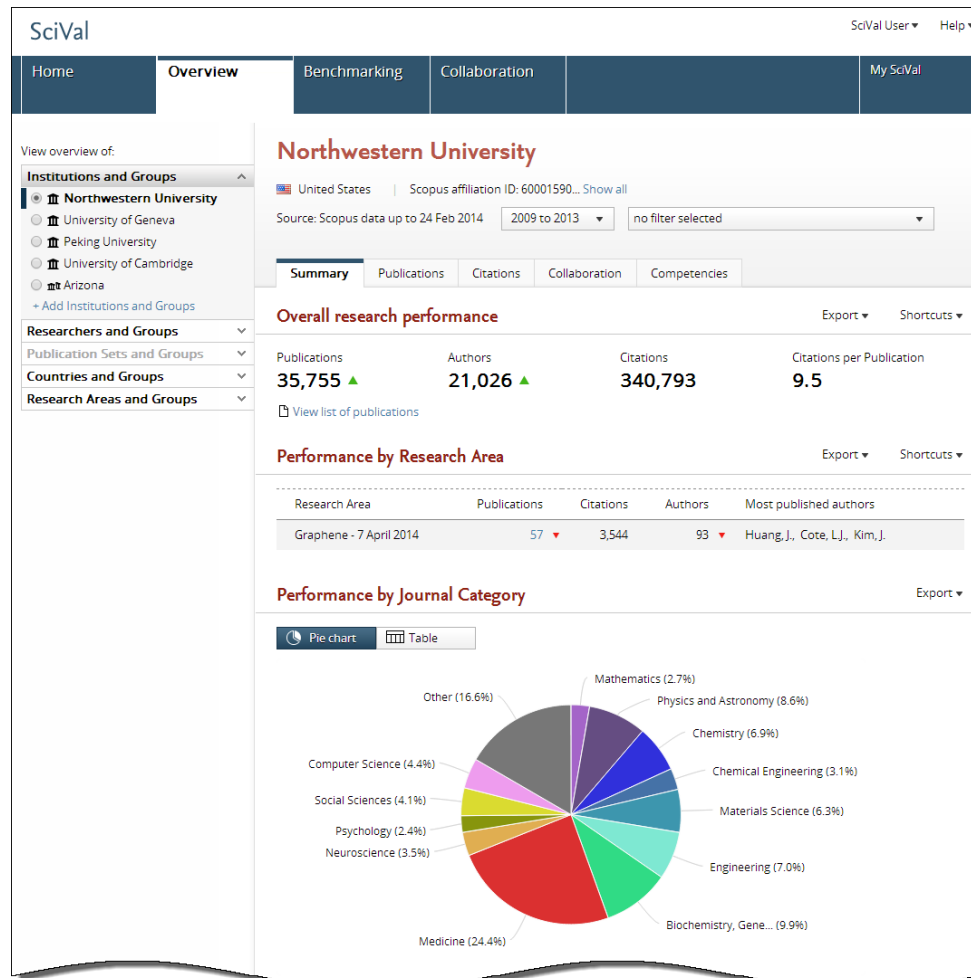
“I want to benchmark my institute, and my departments want to benchmark themselves. How can we all do this according to our different realities?”





Overview

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



Top authors

Export ▼

Top 5 authors at Northwestern University, by number of publications

	Publications	Citations	h-index *
Anastassov, A.	391	8,091	60
Schmitt, M.	358	7,787	62
Stoynev, S.	246	5,779	41
Kanatidis, M.G.	244	4,816	60
Kubik, A.	238	5,624	35

* h-index is based on an author's publications from 1996 onwards

Top collaborating Institutions

Export ▼ Shortcuts ▼

by number of publications co-authored with Northwestern University

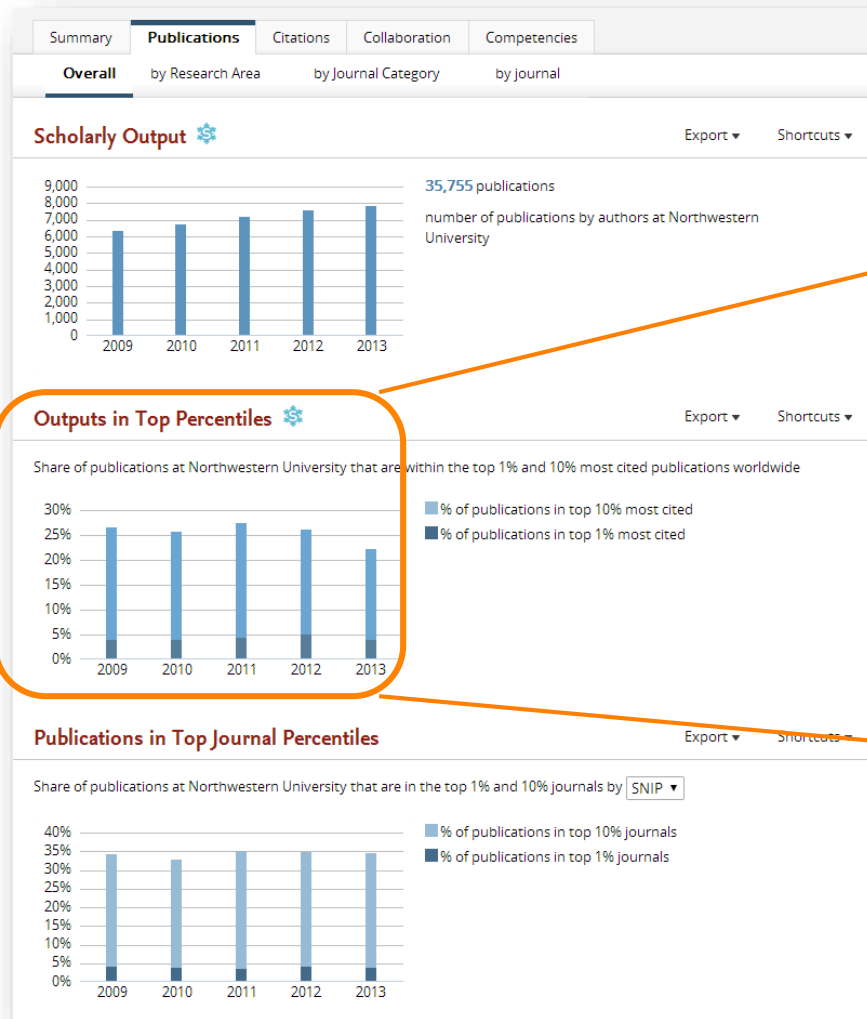
Institution	Co-authored publications	Citations received for co-authored publications	Co-authors
1. Harvard University	1,613 ▲	33,481	2,223 ▲
2. Johns Hopkins University	1,281 ▲	30,637	1,317 ▲
3. University of Chicago	1,272 ▲	22,420	1,527 ▲
4. University of Illinois at Chicago	1,252 ▲	16,420	1,204 ▲
5. University of California at Los Angeles	1,236 ▲	28,014	1,202 ▲
6. University of Michigan	1,133 ▲	22,341	1,013 ▲
7. Argonne National Laboratory	1,019 ▲	17,223	765 ▲
8. University of Wisconsin	911 ▲	19,410	922 ▲
9. University of Washington	909 ▲	19,420	902 ▲
10. University of Rochester	896 ▲	17,075	620 ▼

View the disciplinary focus of your institutions and your top researchers



Overview

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

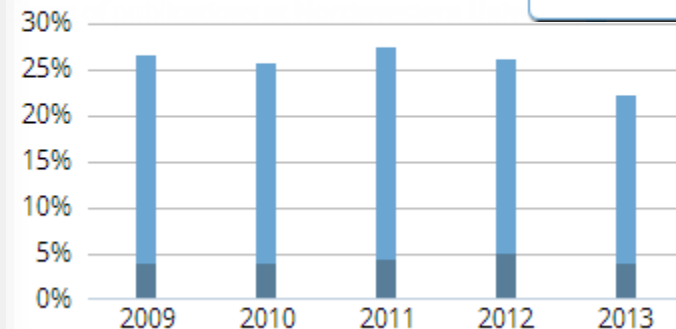


Outputs in Top Percentiles

2012

5.1% in top 1% most cited

26.2% in top 10% most cited

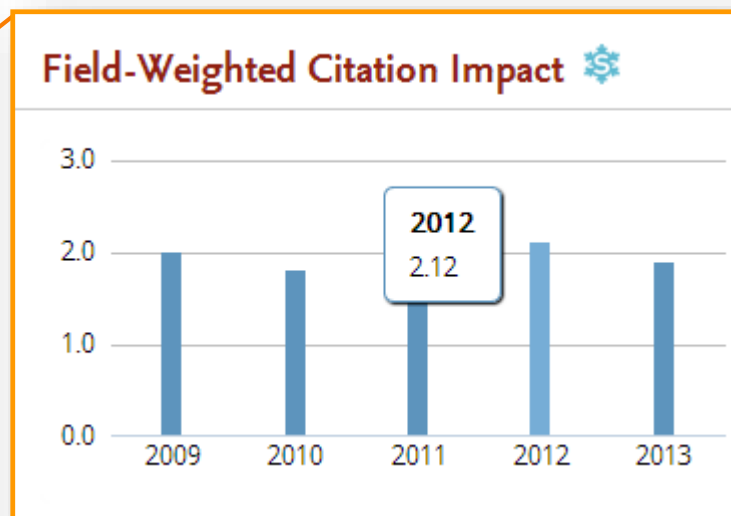
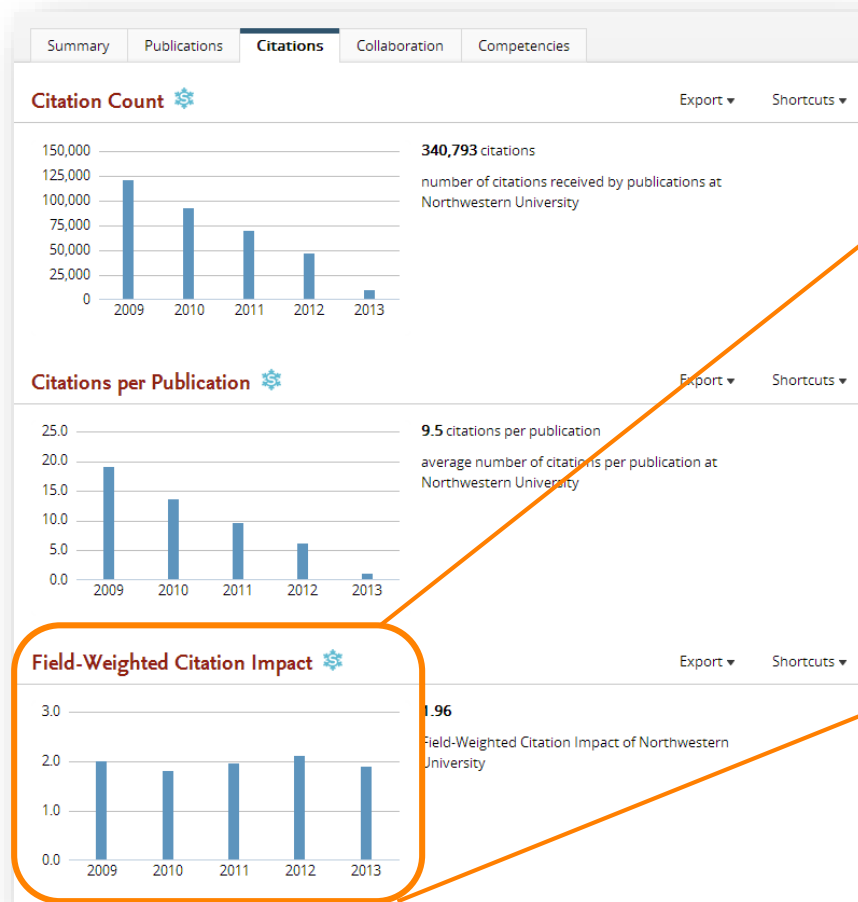


See how many of your publications fall into the top 1% and 10% of the most cited articles in the world



Overview

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

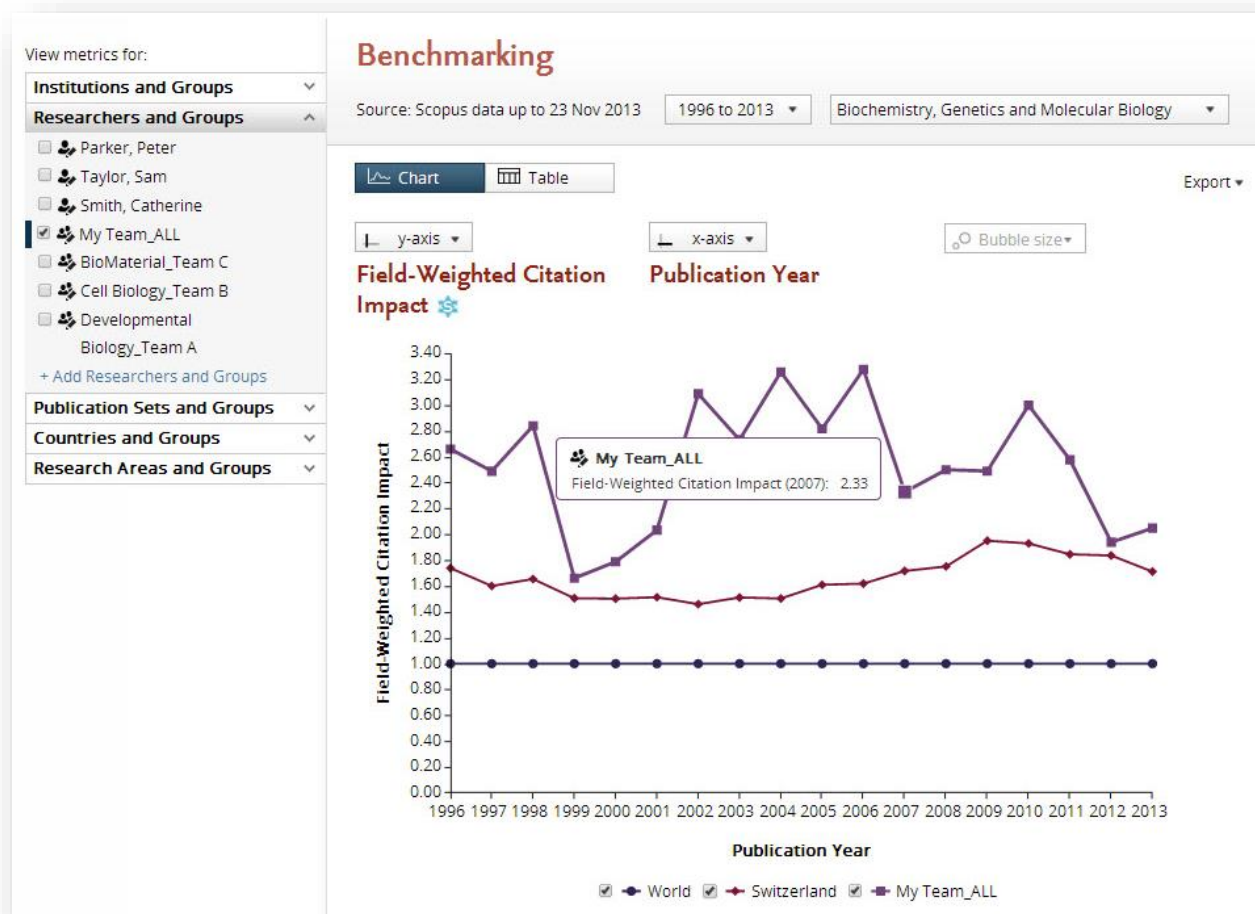


View Field-Weighted Citation Impact that normalizes citation behavior for differences in size, field and publication-type



Benchmarking

“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?”



Test scenario by creating virtual teams and compare using multiple metrics

17 sets of metrics at your disposal

Slice and dice your data from multiple angles to identify your core strengths and weaknesses

Productivity metrics



Scholarly Output
h-indices (*h*, *g*, *m*)

Citation Impact metrics




Citation Count
Citations per Publication
Cited Publications



h-indices (*h*, *g*, *m*)
Field-Weighted Citation Impact
Publications in Top Percentiles
Publications in Top Journal Percentiles
Collaboration Impact (geographical)
Academic-Corporate Collaboration Impact

Collaboration metrics

Authorship Count
Number of Citing Countries
 Collaboration (geographical)
Academic-Corporate Collaboration

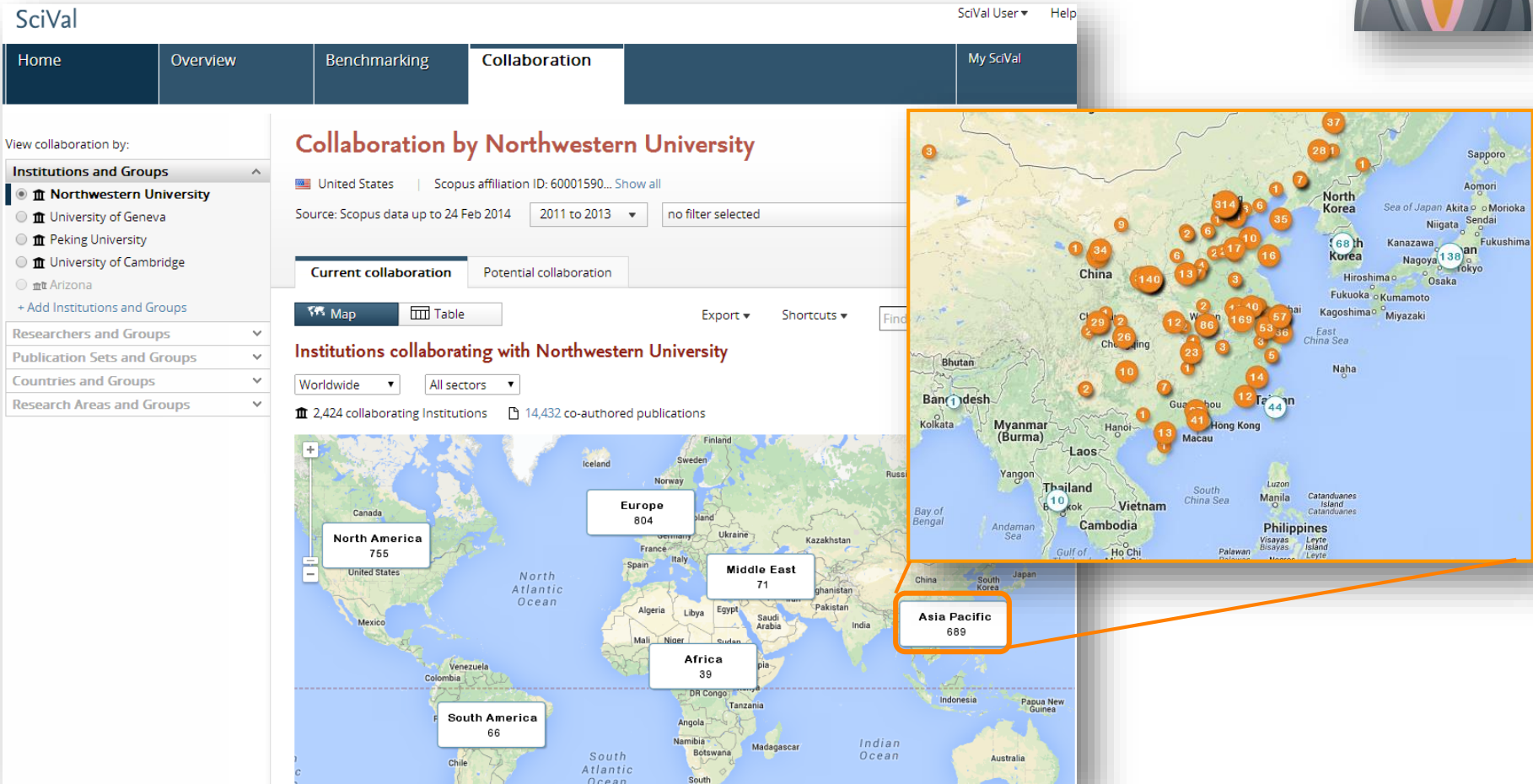
Disciplinary metrics

Journal count
Journal category count



Collaboration

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



Drill into the Google map to identify your collaboration partners in China



Collaboration

Identify existing and potential collaboration partners

Collaboration by Northwestern University

United States | Scopus affiliation ID: 60001590... [Show all](#)

Source: Scopus data up to 24 Feb 2014

2011 to 2013 ▼

no filter selected ▼

Current collaboration

Potential collaboration

Map

Table

Export ▼

Shortcuts ▼

Find Institution

Institutions collaborating with Northwestern University

Asia Pacific ▼

China ▼

All sectors ▼

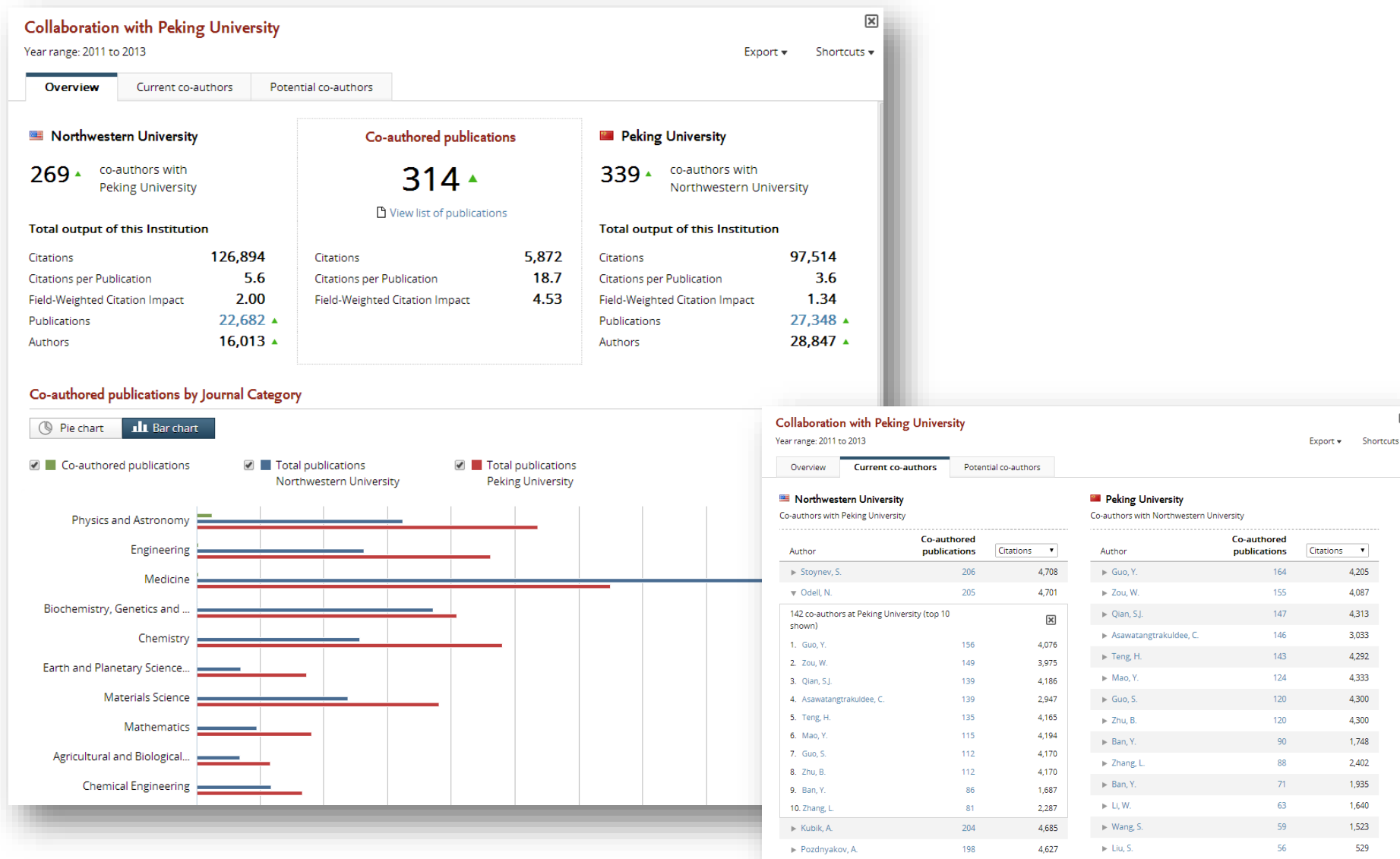
276 collaborating Institutions 2,641 co-authored publications

Institution	Co-authored publications ▼	Co-authors at Northwestern University	Co-authors at the other institution	Citations ▼
Peking University	314 ▲	269 ▲	339 ▲	5,872
CAS - Institute of High Energy Physics	225 ▲	130 ▲	182 ▲	6,774
University of Science and Technology of China	169 ▲	92 ▲	96 ▲	2,047
Xi'an Jiaotong University	140 ▲	202 ▲	237 ▲	819
	120		160 ▲	1,120



Collaboration

Assess the activity level and identify researchers










“I want to benchmark my institute, and my departments want to benchmark themselves. How can we all do this according to our different realities?”



View overview of:

Institutions and Groups ▼

Researchers and Groups ▲

- ☐  Center for Education in Medicine
- ☐  Center for Genetic Medicine
- ☐  Center for Genetic Medicine
- ☐  Center for Healthcare Studies
- ☐  Center for Healthcare Studies
- ☐  Center for Historical Studies
- ☐  Center for Legal Studies
- ☐  Center for Molecular Innovation and Drug Discovery
- [+ Add Researchers and Groups](#)

Publication Sets and Groups ▼

Countries and Groups ▼

Research Areas and Groups ▼

SciVal provides an option to:

1. create your own researcher groups (publication groups soon), or
2. as an optional paid service, have pre-populated groups of researchers added to SciVal as your institution's pre-defined entities. Elsevier will perform the manual refinement of researcher profiles to ensure appropriate matching of Scopus records to each identified researcher.

You can easily benchmark departments and teams by pre-populating the organizational hierarchy in SciVal