

Az igazság pillanatai

*Tényeken alapuló kutatómenedzsment
Magyarországon és Közép-Kelet
Európában*



Porosz Péter
Elsevier

Workshop 2014, Pécs









Elsevier Research Intelligence

Introducing the new SciVal

Porosz Péter
Solution Manager
Elsevier

Networkshop 2014, Pécs

Agenda

1. Elsevier overview
2. Elsevier Research Intelligence portfolio
3. SciVal overview
4. What can SciVal do for you?
5. Appendix
 - Pure overview
 - Analytical Services overview





Elsevier overview



Solutions that help professionals across industries make better decisions, get better results and be more productive



Lead the way in advancing science, technology and health

Marie Curie
(Physics,
Chemistry)



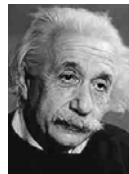
Louis
Pasteur
(Chemistry)



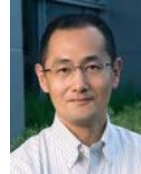
Alexander
Fleming
(Medicine)



Albert
Einstein
(Physics)



Shinya
Yamanaka
(Medicine)



John C.
Mather
(Physics)



Francoise
Barre-Sinoussi
(Medicine)



Craig C Mello
(Medicine)



Galileo's last and greatest work, published in 1638 by Elsevir, Discorsi e Dimostrazioni Matematiche



ELSEVIER

425.125

YEARS OF PUBLISHING

TRADITION | EXCELLENCE

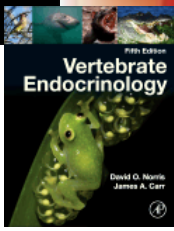
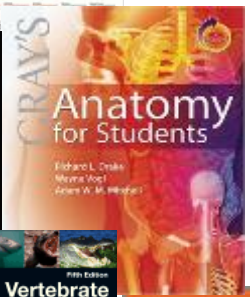
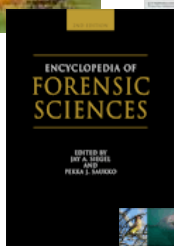


We commemorate the founding of the House of Elsevir in 1580 and celebrate the establishment of the Elsevier company in 1880.





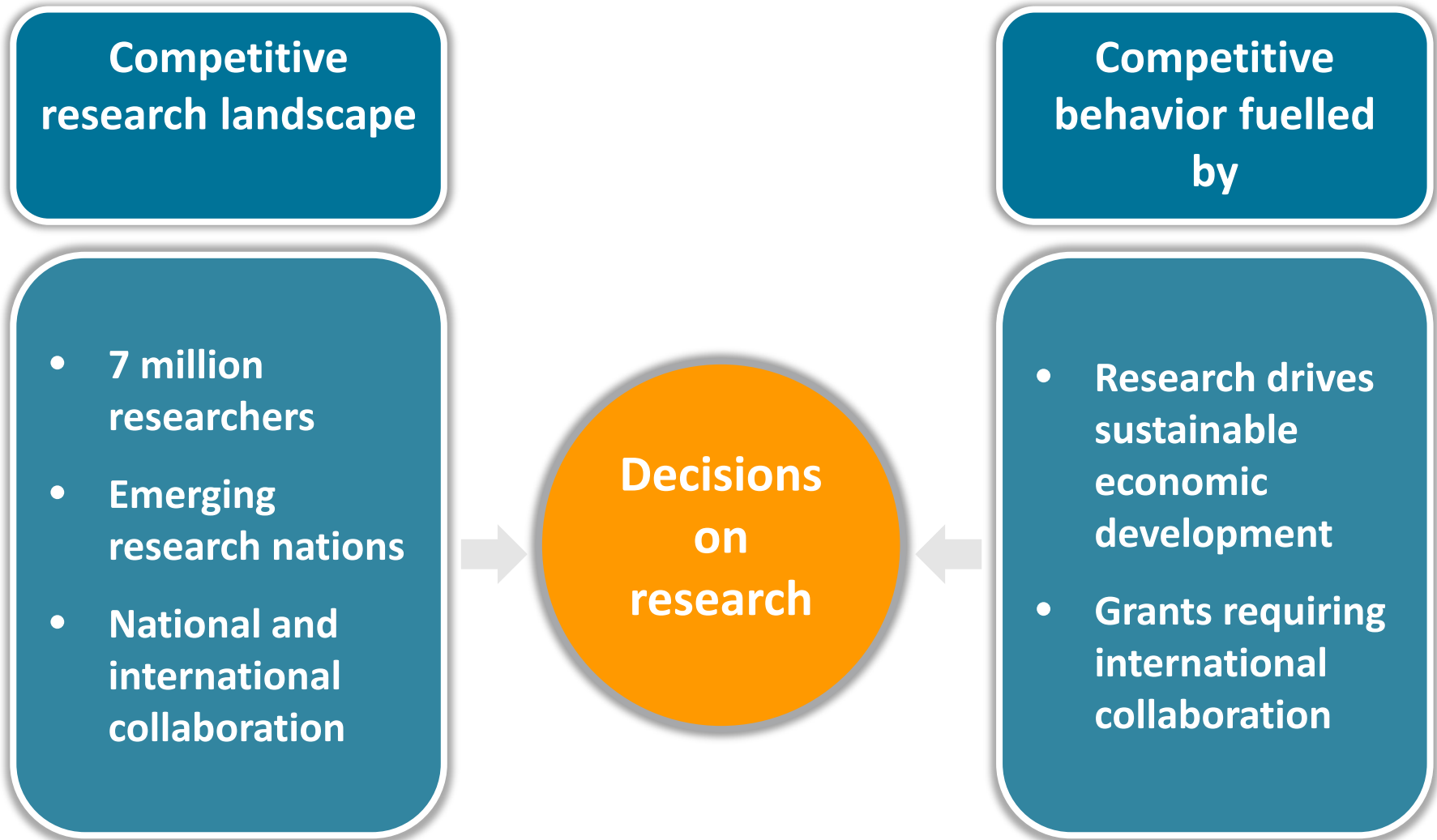
Elsevier Research Intelligence
 Pure Analytical Services
 SciVal



Content + Technology and Analytics = Improved Outcomes

Elsevier Research Intelligence Portfolio

User needs addressed by Elsevier Research Intelligence





Decisions by “triangulating” information

Elsevier Research Intelligence

**Reliable
data**



Your Scientists



**Expert
opinion**

External Review



**Peer
review**

Elsevier Research Intelligence portfolio

What we offer

CORE

SciVal (External View)

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

Modules:

- Overview
- Benchmarking
- Collaboration
- Funding

Pure (Internal View)

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

Modules:

- Administration
- Award Management
- Reporting
- Assessment
- Import
- Portal (Experts, Institutional)
- CV

Analytical Services

Customized analysis, reports and services.

- Analytical Report Services
- Data Integration Services
- Reviewer Finder
- Custom Solution for Funders
- Scopus Custom Data
- Author Profile Refinement Services
- Fingerprint Engine

COMPLEMENTARY TOOLS AND RESOURCES

Scopus

The largest abstract and citation database of peer-reviewed literature; the broadest source of global, relevant scientific research, with tools that track, analyze and visualize research.

Mendeley

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

What we support

ENABLE RESEARCH



Develop Strategy



Identify/Recruit Researchers



Secure Funding



Establish Partnerships



Manage Facilities

CONDUCT RESEARCH



Search, Discovery, Read, Review



Collaborate, Network



Experiment



Analyze, Synthesize

SHARE RESEARCH



Manage Data



Publish, Disseminate



Commercialize



Promote

Who we support

- Research Institutions
- Funders
- Policy makers

- Provosts
- Vice Chancellors Research
- Research Administrators/ Development Professionals
- Researchers
- Research Managers
- Department Heads
- Librarians
- Students
- Communications Professionals
- Technology Transfer Officers
- Grant Managers
- Legislators
- Economic Development Officers

SciVal overview

SciVal Spotlight and Strata – the first generation

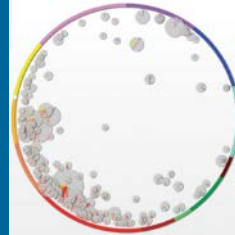
 Approach

 Framework

 Level

 Data

Spotlight



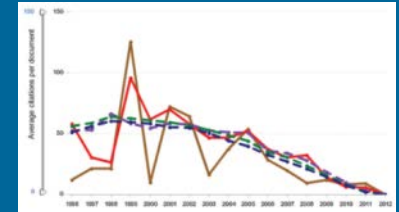
Innovative

Pre-defined structure,
ready-to-go

Overview / snapshot

Updated annually
Institutions & countries
Show only strengths

Strata



Traditional

Flexible set-up, view and
interrogation

Detailed / granular

Updated weekly
Researchers & groups
Show everything

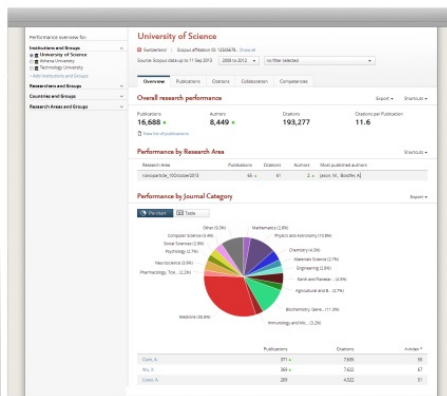
SciVal in a nutshell

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



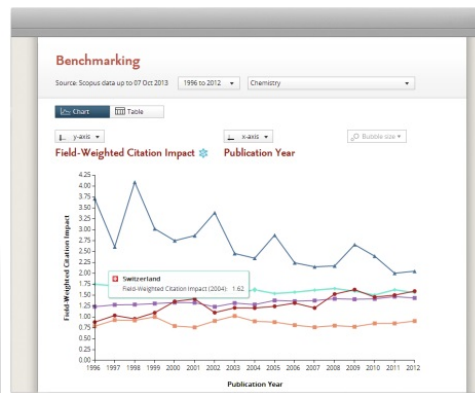
Visualize research performance

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



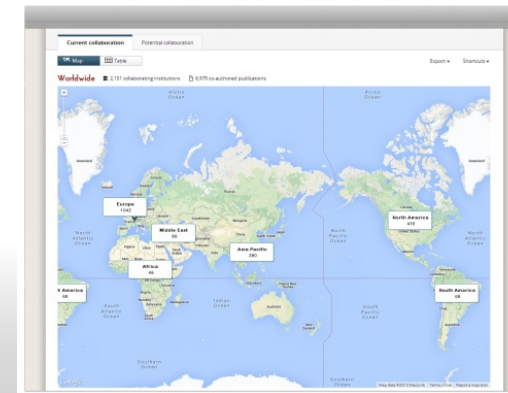
Benchmark your progress

Flexibility to create and compare any research groups



Develop collaborative partnerships

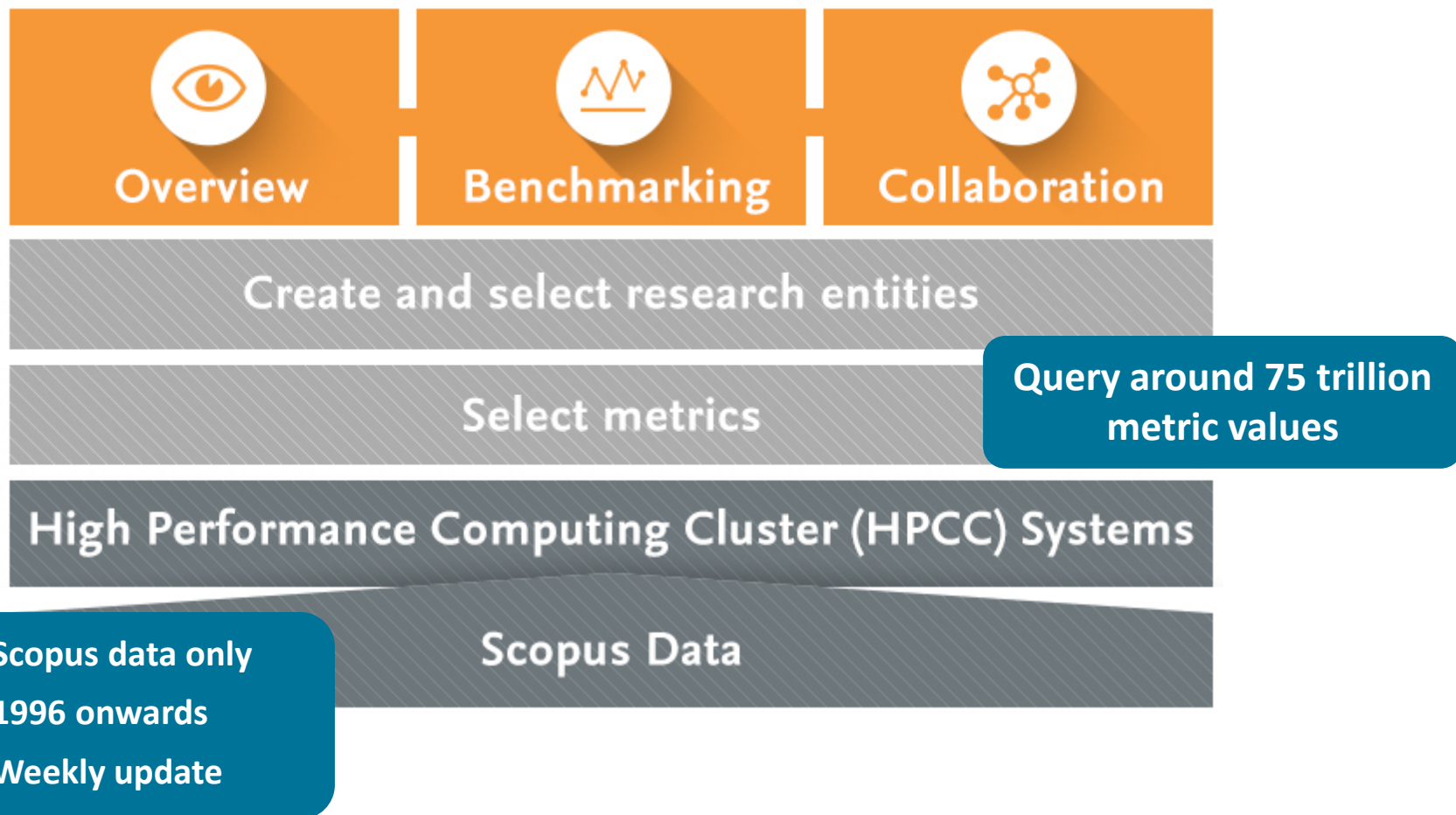
Identify and analyze existing and potential collaboration opportunities





The layers of SciVal

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



About Scopus®



Scopus

- The **largest** abstract and citation database of research information with over **53 million** records
- Updated daily, includes:
 - **21,000+ 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
- Connectivity with ORCID

What can SciVal 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?”





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



SciVal SciVal User Help

Home **Overview** Benchmarking Collaboration My SciVal

View overview of:

- Institutions and Groups
 - Northwestern University
 - University of Geneva
 - Peking University
 - University of Cambridge
 - Arizona
 - + Add Institutions and Groups
- Researchers and Groups
- Publication Sets and Groups
- Countries and Groups
- Research Areas and Groups

Northwestern University

United States | Scopus affiliation ID: 60001590... Show all

Source: Scopus data up to 24 Feb 2014 | 2009 to 2013 | no filter selected

Summary | Publications | Citations | Collaboration | Competencies

Overall research performance

Publications	Authors	Citations	Citations per Publication
35,755 ▲	21,026 ▲	340,793	9.5

View list of publications

Performance by Research Area

Research Area	Publications	Citations	Authors	Most published authors
Graphene - 7 April 2014	57 ▼	3,544	93 ▼	Huang, J., Cote, L.J., Kim, J.

Performance by Journal Category

Pie chart | Table

Top authors

Export ▼

Top 5 authors at Northwestern University, by

	Publications	Citations	h-Index *
Anastassov, A.	391	8,091	60
Schmitt, M.	358	7,787	62
Stoynev, S.	246	5,779	41
Kanatzidis, 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

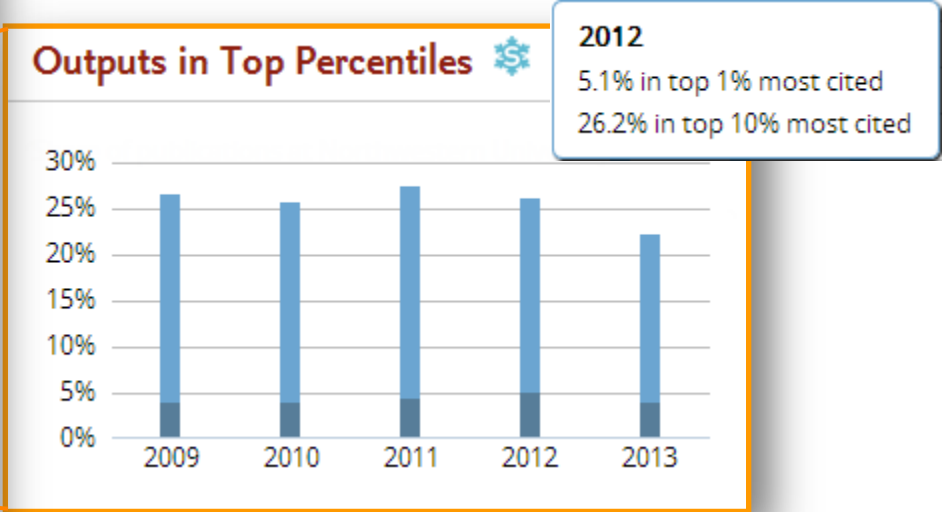
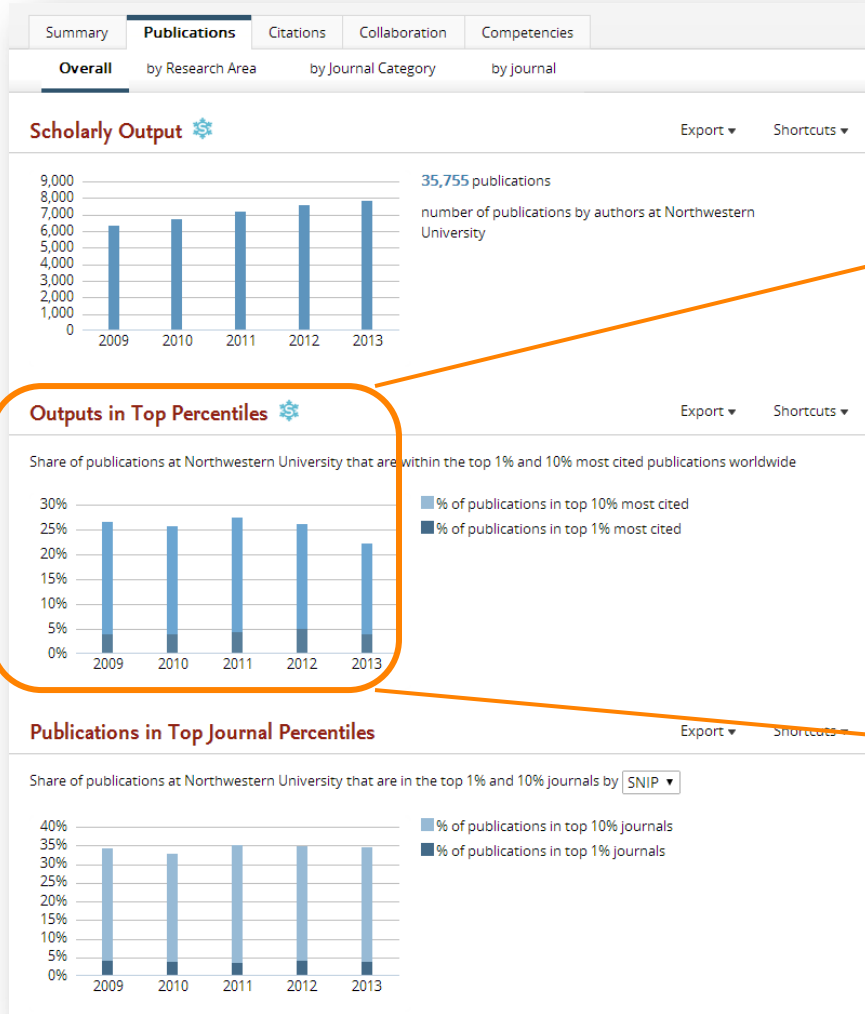
Institution	Co-authored publications	Citations received for co-authored publications	Co-authors
1. Harvard University	1,613 ▲	33,481	2,223 ▲
2. Johns Hopkins University	1,281 ▲	30,637	1,317 ▲
3. University of Chicago	1,272 ▲	22,420	1,527 ▲
4. University of Illinois at Chicago	1,252 ▲	16,420	1,204 ▲
5. 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

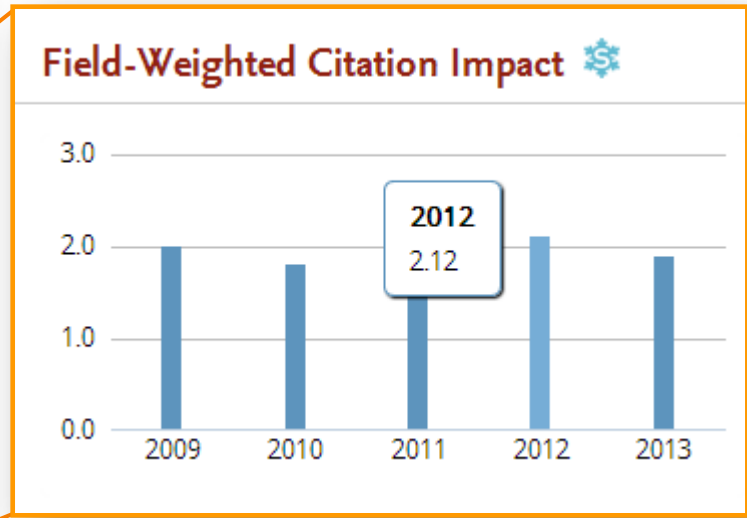


See how many of your publications fall into the top 1% and 10% of the most cited articles in the world



Overview

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

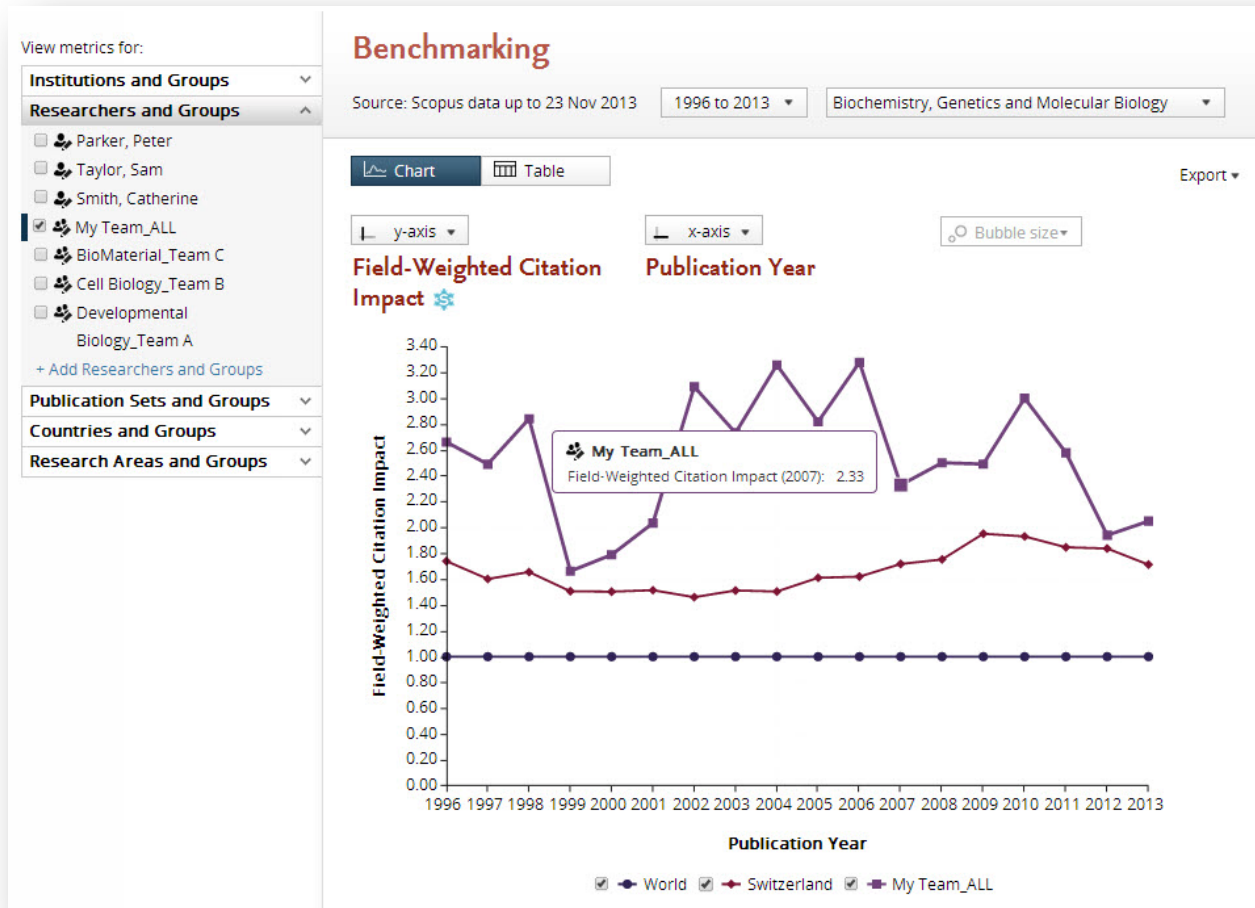


View Field-Weighted Citation Impact that normalizes citation behavior for differences in size, field and publication-type



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



Snowball Metric; www.snowballmetrics.com/metrics

Collaboration metrics



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

Disciplinary metrics

Journal count
Journal category count

SciVal Metrics Guidebook

This comprehensive metrics guidebook is intended to be a straightforward, practical companion for you to find the right metrics to meet your objectives.

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	Publication 6
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	A3	B4	C2
Publication B	A1	B1	C3
	A2	B4	C2
Publication C	A1	B1	C3
	A2	B2	C1
	A3	B2	C1
Publication D	A1	B1	C3
	A4	B1	C3
Publication E	A1	B1	C3
	A2	B1	C3
	A3	B1	C3
Publication F	A1	B1	C3
	A3	B1	C3
	A2	B1	C3

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 citations 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 short-comings
 - Worked examples



Collaboration

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



SciVal SciVal User Help

Home Overview Benchmarking **Collaboration** My SciVal

View collaboration by:

- Institutions and Groups**
- Northwestern University
 - University of Geneva
 - Peking University
 - University of Cambridge
 - Arizona
 - + Add Institutions and Groups
- Researchers and Groups
- Publication Sets and Groups
- Countries and Groups
- Research Areas and Groups

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

Institutions collaborating with Northwestern University

Worldwide | All sectors

2,424 collaborating Institutions | 14,432 co-authored publications



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

Collaboration with Peking University

Year range: 2011 to 2013

Export Shortcuts

Overview Current co-authors Potential co-authors

Northwestern University

269 ▲ co-authors with Peking University

Total output of this Institution

Citations 126,894
 Citations per Publication 5.6
 Field-Weighted Citation Impact 2.00
 Publications 22,682 ▲
 Authors 16,013 ▲

Co-authored publications

314 ▲

[View list of publications](#)

Peking University

339 ▲ co-authors with Northwestern University

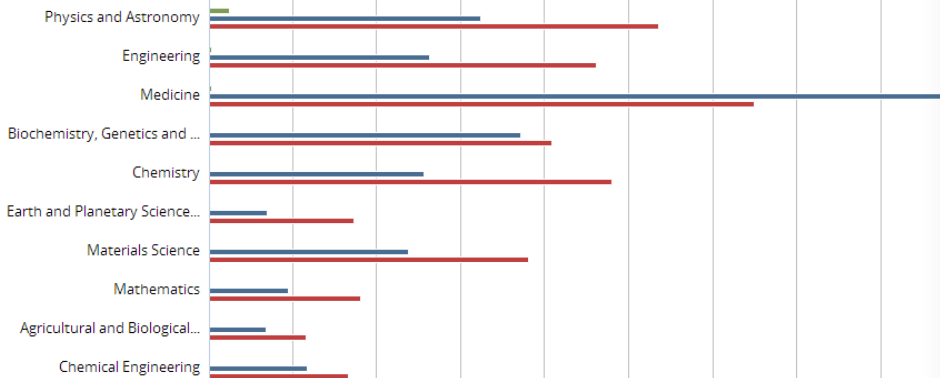
Total output of this Institution

Citations 97,514
 Citations per Publication 3.6
 Field-Weighted Citation Impact 1.34
 Publications 27,348 ▲
 Authors 28,847 ▲

Co-authored publications by Journal Category

Pie chart Bar chart

Co-authored publications Total publications Northwestern University Total publications Peking University



Collaboration with Peking University

Year range: 2011 to 2013

Export Shortcuts

Overview Current co-authors Potential co-authors

Northwestern University

Co-authors with Peking University

Author	Co-authored publications	Citations
► Stoynev, S.	206	4,708
▼ Odell, N.	205	4,701
142 co-authors at Peking University (top 10 shown)		
1. Guo, Y.	156	4,076
2. Zou, W.	149	3,975
3. Qian, S.J.	139	4,186
4. Asawatankuldee, C.	139	2,947
5. Teng, H.	135	4,165
6. Mao, Y.	115	4,194
7. Guo, S.	112	4,170
8. Zhu, B.	112	4,170
9. Ban, Y.	86	1,687
► Zhang, L.	81	2,287
► Kubik, A.	204	4,685
► Pozdnyakov, A.	198	4,627

Peking University

Co-authors with Northwestern University

Author	Co-authored publications	Citations
► Guo, Y.	164	4,205
► Zou, W.	155	4,087
► Qian, S.J.	147	4,313
► Asawatankuldee, C.	146	3,033
► Teng, H.	143	4,292
► Mao, Y.	124	4,333
► Guo, S.	120	4,300
► Zhu, B.	120	4,300
► Ban, Y.	90	1,748
► Zhang, L.	88	2,402
► Ban, Y.	71	1,935
► Li, W.	63	1,640
► Wang, S.	59	1,523
► Liu, S.	56	529

“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

SciVal - Solution to your strategic planning challenges

Gain immediate access to view and analyze the world's research to:

- View the ready-made, at-a-glance snapshot of your research performance
- Benchmark your performance against any set of peers.
- Model test scenarios by creating virtual teams and newly emerging research areas...
- Establish collaborative partnerships locally or globally
- Track and monitor weekly to stay up-to-date with changes in the market



Pure: Comprehensive research information management

Consolidate

- Simplify research information management and reduce administrative overhead
- Capture data across the world of research

Validate

- Certify your research information as validated and reliable

Profile

- Create rich researcher profiles and publication lists on the fly
- Generate and share personalized CVs
- Achieve precise, current, reliable researcher profile publication lists with minimal effort

Report

- Build and share reports tailored to uncover actionable insights
- Streamline national assessment reporting (e.g. REF2014, BFI, ERA, SEP)

Analyze

- Track progress towards research milestones for groups and individuals
- Identify subject experts through the Elsevier semantic Fingerprint Engine™

Monitor

- Monitor your research grant life cycle and success rates

Showcase

- Pure's portals promote accomplishments and facilitate collaboration through expertise profiling and research networking

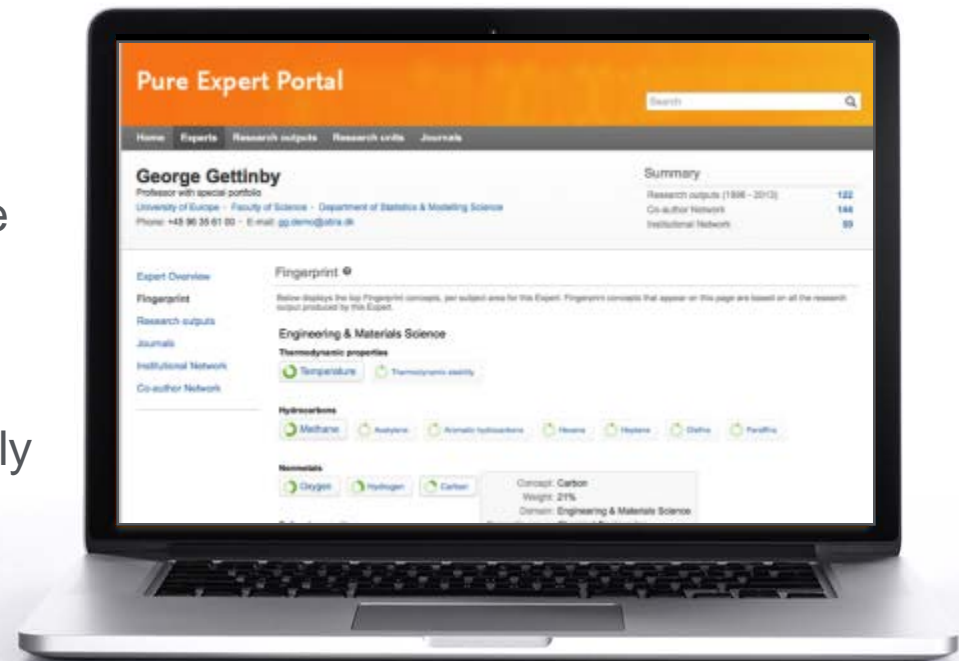
Pure combines internal systems, external data sources and legacy data into a single platform, providing a comprehensive view of your institution's research activities



Pure Experts Portal

Showcase and Discover Expertise:

- Demonstrate researcher activities and accomplishments to attract potential collaborators
- Discover more about the content written by other researchers
- Identify other researchers' distinctive expertise and find potential partners
- Facilitate collaborations by exposing publishing connections and make researchers' accomplishments readily discoverable

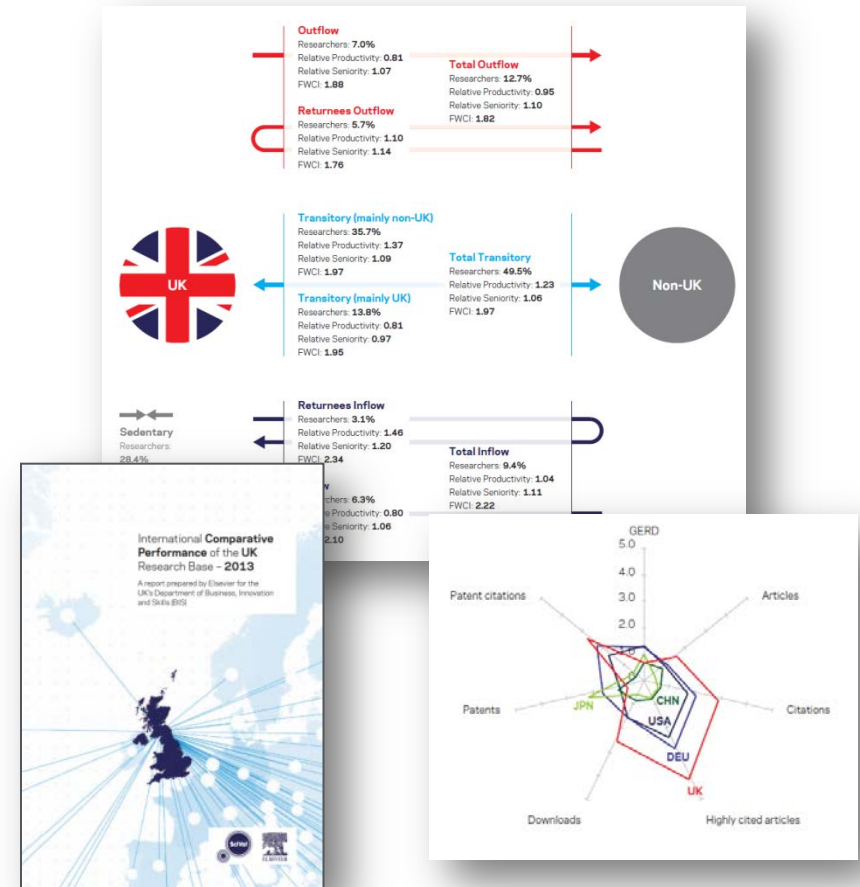


Every researcher profile delivers a comprehensive list of publications, coauthor and institutional networks, a list of similar experts and a semantic index, or Fingerprint™ visualization, of the researcher's distinctive expertise

SciVal Analytics – Tailored data and report services for measuring research performance

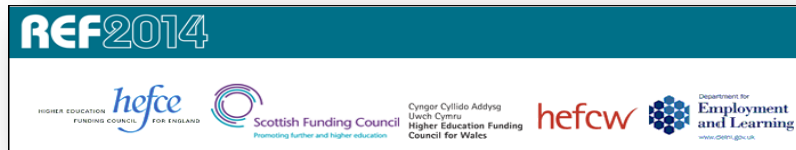
Make more informed decisions related to funding allocations, research policies and strategies

- Provides in-depth analyses in areas such as international comparative performance, ROI of funded projects, research excellence initiatives and research landscape studies
- Offers flexibility to choose data sources, select the time period, and identify who to benchmark against (peers, country, region and world)
- Select datasets from Scopus Custom Data to build an in-house database and perform your own analysis



Customized analysis and reports to measure research performance

UK's national **Research Excellence Framework** assessment program, 2014



International Comparative Performance of UK Research Base, UK (BIS), 2011 & 2013

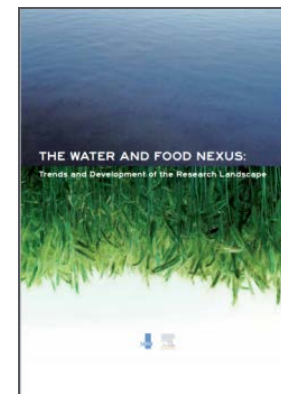


National Excellence in Research for Australia assessment program, 2012

**The Water & Food Nexus, 2012
Stem Cell Research, 2013**



Science Europe report on European research collaboration and researcher mobility, 2013



Elsevier Research Intelligence

Thank you!