Analytical Services
For Academic Executives
Analytical Services

We help the world’s leading universities evaluate their research performance and benchmark against selected peer institutions.

The world of research is increasingly competitive. It's more global, more interdisciplinary and more resource-constrained than ever before. Evidence-based insights that complement institutional knowledge and expertise enable you to develop research strategies that better position your institution to get - and stay - ahead.

Elsevier’s Analytical Services team is experienced in serving policy makers, funders, and academic and corporate research institutions around the world. In order to provide the best solution, our team takes a consultative approach to understand your goals and interests.

The team uses data and insights from inside and outside Elsevier to give consultative reporting that facilitates knowledge-based decision-making. We can create a mutual link between Scopus data and your institution’s or country’s researcher database, in order to improve the accuracy of author profiles and help researchers demonstrate a more comprehensive picture of their distinctive expertise. Scopus Custom Data is selected by policy makers, funders, and academic and corporate research institutions for its breadth of coverage and rich structured data, being the data source for Times Higher Education and QS rankings, as well as being used by 84% of the top 100 universities.

Not just data, but insights

To provide you with the best solution, Analytical Services takes a consultative approach to understand your information needs. Taking the time to fully appreciate your goals and interests and provide the most appropriate analysis, our team combines high quality data sources with technical and research metrics expertise accrued over Elsevier’s 130 years in academic publishing.

From simple, targeted reports to comprehensive multidimensional studies, as well as data delivery and web integration services, we provide a range of offerings to meet your research management needs.

Our dedicated consultants move beyond data to provide powerful insights when measuring research performance. The resulting insights answer pressing research management questions and inform decisions related to funding allocations, research policies and strategies.

The questions Academic Executives are asking us:

Q: How is my institution performing and what research strategies could help us?

Q: How is my research helping society?

Q: How do I foster the best team of researchers?
How is my Institution performing & what research strategies could help us?

Our insights help you
- Appreciate your research portfolio, identify areas of research strength and areas that need additional support
- Get insight into ranking performance
- See how your institute compares to others and determine appropriate benchmarks to evaluate performance

So you can
- Understand and define a successful research strategy, based on meaningful measures
- Showcase your research institute to attract funding, collaborators, and researchers

Case studies

The challenge
A Dean at a University asked us to help them assess their cancer research portfolio to meet their strategic goals.

Our approach
We firstly defined the specific subject area and then applied the appropriate metrics to assess performance in this subject area.

The result
The university had a clear view of the development of the specific subject area. In turn, this helped them to allocate their budget distribution, strategic plan for subject development, and talent recruitment.


Citation based impact of cancer research at the most prolific cancer research institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dana-Farber Cancer Institute</td>
<td>6.19</td>
<td>4.23</td>
<td>1.39</td>
</tr>
<tr>
<td>Memorial Sloan Kettering Cancer Center</td>
<td>3.33</td>
<td>2.45</td>
<td>2.05</td>
</tr>
<tr>
<td>Harvard University</td>
<td>2.20</td>
<td>2.02</td>
<td>1.93</td>
</tr>
<tr>
<td>University of California at San Francisco</td>
<td>1.89</td>
<td>1.82</td>
<td>1.82</td>
</tr>
<tr>
<td>Johns Hopkins University</td>
<td>1.78</td>
<td>1.74</td>
<td>1.69</td>
</tr>
<tr>
<td>University of Texas MD Anderson Cancer Center</td>
<td>1.79</td>
<td>1.66</td>
<td>1.62</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>1.56</td>
<td>1.49</td>
<td>1.44</td>
</tr>
<tr>
<td>Mayo Clinic Rochester MN</td>
<td>1.46</td>
<td>1.34</td>
<td>1.27</td>
</tr>
<tr>
<td>National Institutes of Health</td>
<td>1.43</td>
<td>1.29</td>
<td>1.18</td>
</tr>
<tr>
<td>University of Toronto</td>
<td>1.41</td>
<td>1.29</td>
<td>1.20</td>
</tr>
</tbody>
</table>

Source: Scopus and SciVal

The challenge
A university asked us to help them develop and assess their research strategy.

Our approach
One way we did this was through analyzing the research focus of the university. We pinpointed areas of high focus compared to national trends and identified areas for potential development.

The result
The university had clarity around areas of high focus and areas that would benefit from mid-sized investment.

Reference: Citation based impact of cancer research at the most prolific cancer research institutions

Measuring research focus at a leading university

This chart shows how much research from the institution is focused on each subject relative to the national averages.

Source: Scopus
Seeing your research portfolio from a new perspective: output, growth and impact analytics

The main benefits of this analysis:

- Identify strengths and weaknesses in your research portfolio
- Understand how your research supports practical application and innovation
- Evaluate trends over time and understand the impact of changes in policy and strategy
- Determine who is accessing research and how

Worldwide trends show that publication output has been rising as funding for research has increased. However, publication output does not always correlate with measures of impact based on citations. Understanding the impact of research requires a clear knowledge of your goals.

Questions we can help you answer

- What are the areas of highest impact and excellence at my institution?
- Are we specialized or lagging in any areas?
- What are the recent trends in research at my institution and similar institutions?
- Has there been a return on investment resulting from our recent strategic planning exercise?

Our approach

Using Scopus data, we use metrics such as publication count, citation impact and number of publications to assess an institution’s performance. Trends can also be analyzed over a period of time to provide further insight.

Opportunities for additional customization

To fit your needs, we can further customize our analysis. For example, we can work with you to assess a specific research area of interest, defined by you, or consider specific additional metrics that are either publicly available or are specific to your institution, such as the number of researchers, buzz on social media and funding dollars received.

Evaluate trends over time and understand the impact of changes in policy and strategy

Identify strengths and weaknesses in your research portfolio

Understand how your research supports practical application and innovation

Determine who is accessing research and how
How is my research helping society?

Our insights help you
- Examine the economic and social impact of research
- Supplement your institution’s qualitative evaluations with additional analyses

So you can
- Measure the impact of research
- Showcase the value that your institution is bringing to its local community

Case studies

The challenge
A university asked us to help them identify the far-reaching effects of their research to better understand who is reading it, where it is being cited, and how it supports real world applications.

Our approach
We carried out analysis that primarily showed the university to be lagging behind the national average in terms of the percentage of cited publications in WIPO patents.

The result
The university engaged in a review of policies and practices, with the aim of helping increase citations in patents.

The challenge
An institution asked us to help them show the distribution of their research, from basic research to applied technology.

Our approach
We carried out analysis that primarily showed the distribution of research across the research levels.

The result
The findings helped the institution assess the level at which their research might be relevant for innovation and tech transfer. Additionally, researchers can be identified who publish in multiple research levels, since these might be more capable of moving their work along translational pathways than researchers who only publish at a single level.

Scatterplot of number of publications vs. research level, per subject, 2012-2016
The below scatterplot shows a portfolio level analysis of the research level (basic, applied, or engineering-technological) and number of publications for each subject at an institution.
Seeing how your research supports real world applications: economic impact and knowledge exchange analytics

The main benefits of this analysis:

- Understand the extent of collaboration with corporate entities
- Learn how your research is supporting practical applications and innovations

Universities strive to make an impact beyond the walls of their institution. Understanding how research is connected to the corporate sector and supports innovation is crucial at helping you understand the impact it has on advancing humanity.

Questions we can help you answer

- To what extent do our researchers collaborate with the corporate sector?
- How does our research support practical applications and innovation?
- How much is the corporate sector accessing our research?

Our Analytical Services team shares insights to provide academic institutions with knowledge about the ways they work with and support the corporate sector. They do this by looking at the impact of their collaboration with corporate institutions, how their research is supporting innovation and patents, and assessing usage of their output by the industry sector. Institutions can then use these findings to identify industry partners to fund mutually beneficial projects, or commercialize academic research and showcase how their research is being translated into real-world applications.

Our approach

By connecting institutions to their sector, we can assess cross-sector partnerships and research usage by the corporate sector. We can assess citations in patents filed in a number of patent offices including from the United States Patent and Trademark Office (USPTO), the European Patent Office (EPO), the Japanese Patent Office (JPO), the Patent Cooperation Treaty (PCT) of the World Intellectual Property Organization (WIPO), and the UK Intellectual Property Office (UKIPO).

Opportunities for additional customization

We can work with you to explore opportunities for additional customization. This may include: assessing a specific area of interest or conducting a deep dive analysis of publications cited in clinical guidelines or policy documents. We can also incorporate additional metrics that are either publicly available or specific to your institution.
How do I foster the best team of researchers?

Our insights help you

- Understand the strengths of existing research connections
- Learn where to build stronger connections to improve the impact of your research team
- Set strategies for increasing diversity

So you can

- Measure the impact of research

Case study

The challenge
Our customer wanted to know who to build stronger collaborations with to help elevate their research impact.

Our approach
We analyzed the result of their most prolific collaborations to assess their impact.

The result
Our analysis equipped the institution to identify partner institutions to build stronger relationships with.
Bringing together the right people to help you: collaboration analytics

The main benefits of this analysis:

- Assess how much your institute engages in collaboration relative to other institutes
- Evaluate existing collaborative partners
- Identify potential partners

International collaboration is significantly and positively associated with the citation impact of the resulting publications. Collaborating can increase the overall performance of your institution, as well as its visibility across borders. Understanding current collaboration patterns is crucial toward maximizing the returns on research investment.

Questions we can help you answer

- How much are we collaborating within and outside our institution?
- Who are we collaborating with most?
- Who should we collaborate with?
- Have there been any benefits to engaging in collaborations?

Our approach

Using Scopus data, we assess the affiliation by-lines and categorize publications as institutional, national, or international collaborations based on the affiliation’s geographical location. Institutional collaborations are defined as those where all authors are from the same institution. National collaborations are defined as those where authors are from different institutions all from the same country. International collaborations are defined as those where authors are from institutions in different countries.

Opportunities for additional customization

To meet your specific goals, we can broaden our analysis to explore the extent of collaborations across regions and groups of countries – for example, within the EU28 or across states. If you have a specific subject of interest, we can deep-dive into this to learn about current and potential partners within that specific research field.
Tools and data sources readily available to our teams

**Scopus**

The largest abstract and citation database and premier source of author profiles in the world, offering high quality data and tools for analyzing the research landscape – so you can advance your research, keep an eye on key and emerging trends, increase research visibility, and discover new collaborators.

Learn more at [elsevier.com/solutions/scopus](http://elsevier.com/solutions/scopus)

**SciVal**

SciVal offers quick, easy access to the research performance of 10,000 research institutions and 230 nations worldwide – so you can visualize research performance, benchmark relative to peers, develop collaborative partnerships and analyze research trends.

Learn more at [elsevier.com/solutions/scival](http://elsevier.com/solutions/scival)

**ScienceDirect**

Built upon thousands of journals and books and stringent quality standards, ScienceDirect delivers you reliable information to help you move your research forward. It offers smart, intuitive functionality and personalized recommendations so you can answer pressing research questions in less time, generate ideas, get in-depth insights about trending research topics, stay on top of your field, and take your next big step towards discovery.

Learn more at [elsevier.com/solutions/sciedirect](http://elsevier.com/solutions/sciedirect)

**LexisNexis**

LexisNexis is a leader in comprehensive and authoritative legal, news and business information and tailored applications. LexisNexis® is a member of Reed Elsevier Group plc. Patents include those from the United States Patent and Trademark Office (USPTO), the European Patent Office (EPO), the Japanese Patent Office (JPO), the Patent Cooperation Treaty (PCT) of the World Intellectual Property Organization (WIPO), and the UK Intellectual Property Office (UKIPO).

Learn more at [lexisnexis.com](http://lexisnexis.com)

**Plum Analytics**

Research assessment has moved to include new types and measurements of impact alongside traditional citation metrics. Elsevier offers a balanced, multi-dimensional basket of metrics to help universities, researchers and funders to showcase the research and assess the impact at the journal, article and author levels. On article level metrics specifically, Plum Analytics gathers metrics about research from dozens of scholarly sources, media channels and social media tools, and categorizes them into Usage, Captures, Mentions, Social Media and Citations.

Learn more at [plumanalytics.com](http://plumanalytics.com)
Gender in the Global Research Landscape

Critical issues related to gender disparity and bias must be examined by sound studies. Drawing upon our high-quality global data sources, analytical expertise, and unique gender disambiguation methodology, this report is an evidence-based examination of research performance worldwide through a gender lens. Covering 20 years, 12 geographies and all 27 Scopus subject areas, this report provides powerful insight and guidance on gender research and gender equality policy for governments, funders and institutions worldwide.

International comparative performance of the UK research base - 2016

The UK’s Department for Business, Energy & Industrial Strategy (BEIS) commissioned Elsevier to assess the performance of the UK’s research base compared with seven other research-intensive countries (Canada, China, France, Germany, Italy, Japan, and the US), four fast growing nations (Brazil, India, Russia and South Korea), and international benchmarks.

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