



**ELSEVIER**

# Trends and evolution of electronic resources comparing France, UK and Brazil

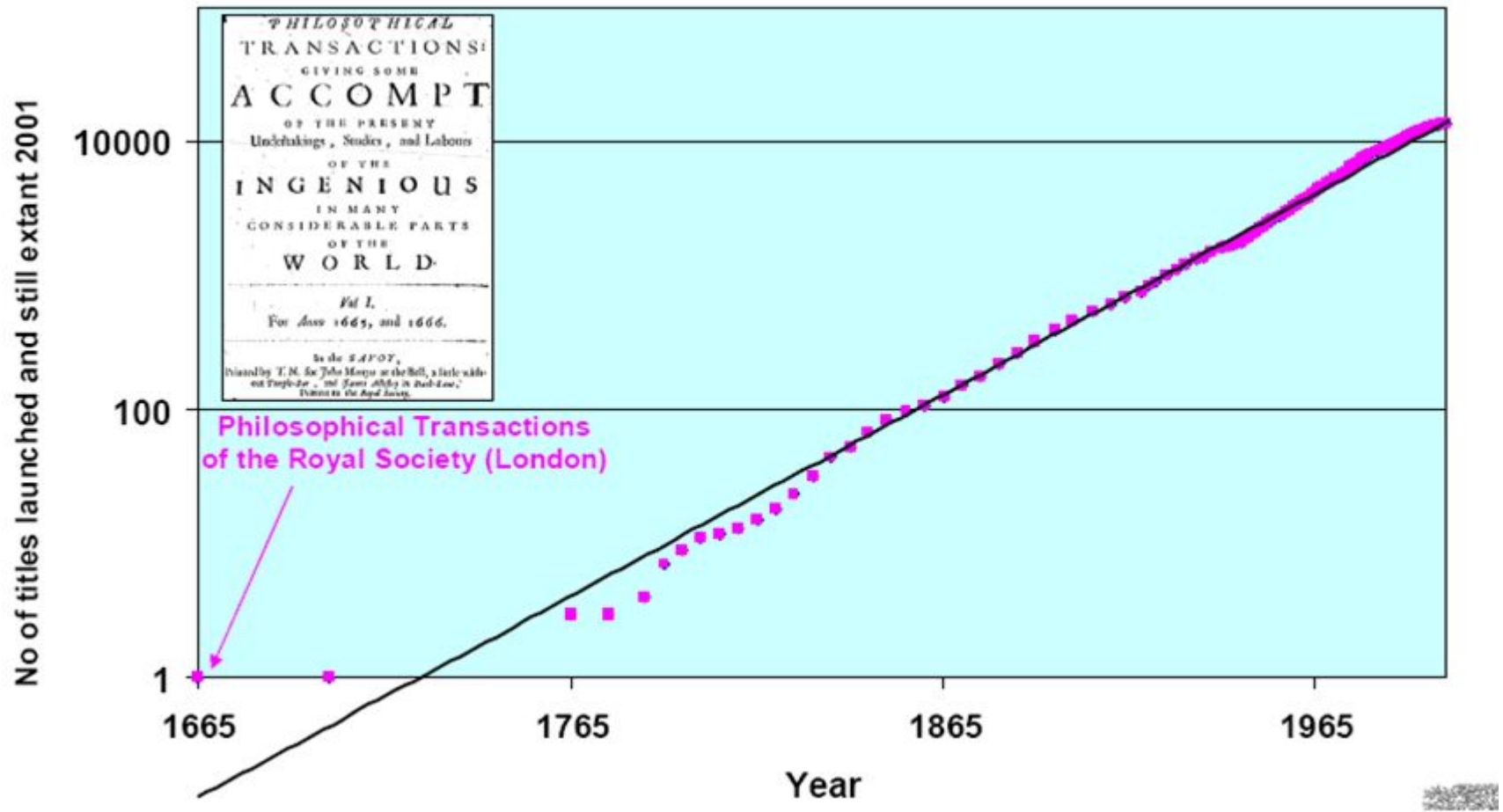
**26th November 2009**

# What will we cover

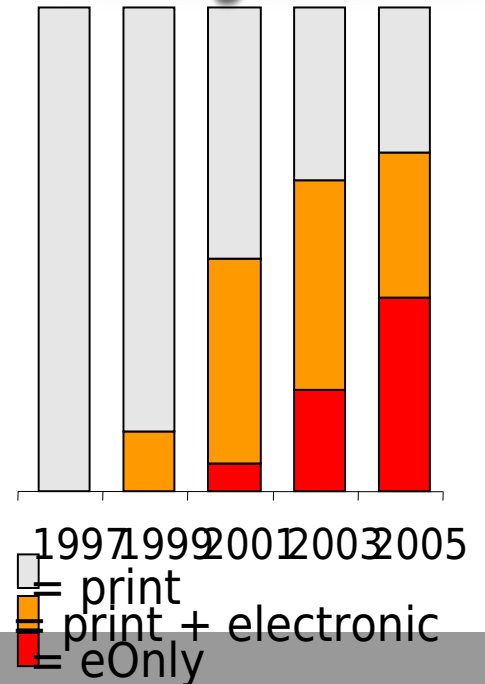
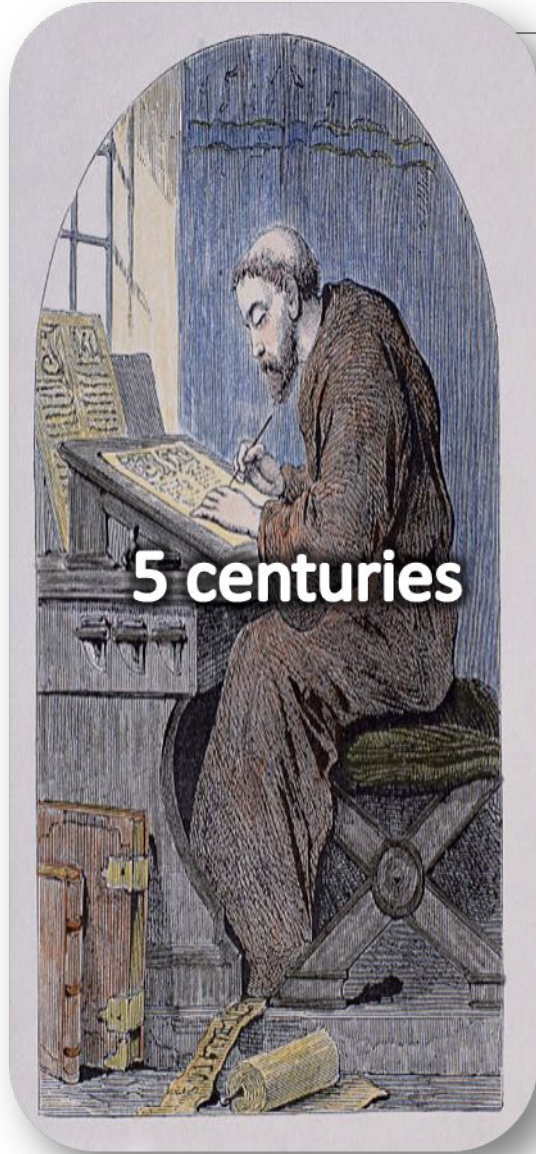
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- How has the electronic access changed over time?
- How are France, Brazil and the UK using our resources?
- How do they compare against each other?: Scopus Data
- How is analysis being done?

# Peer Reviewed Journal Growth 1665 - 2001

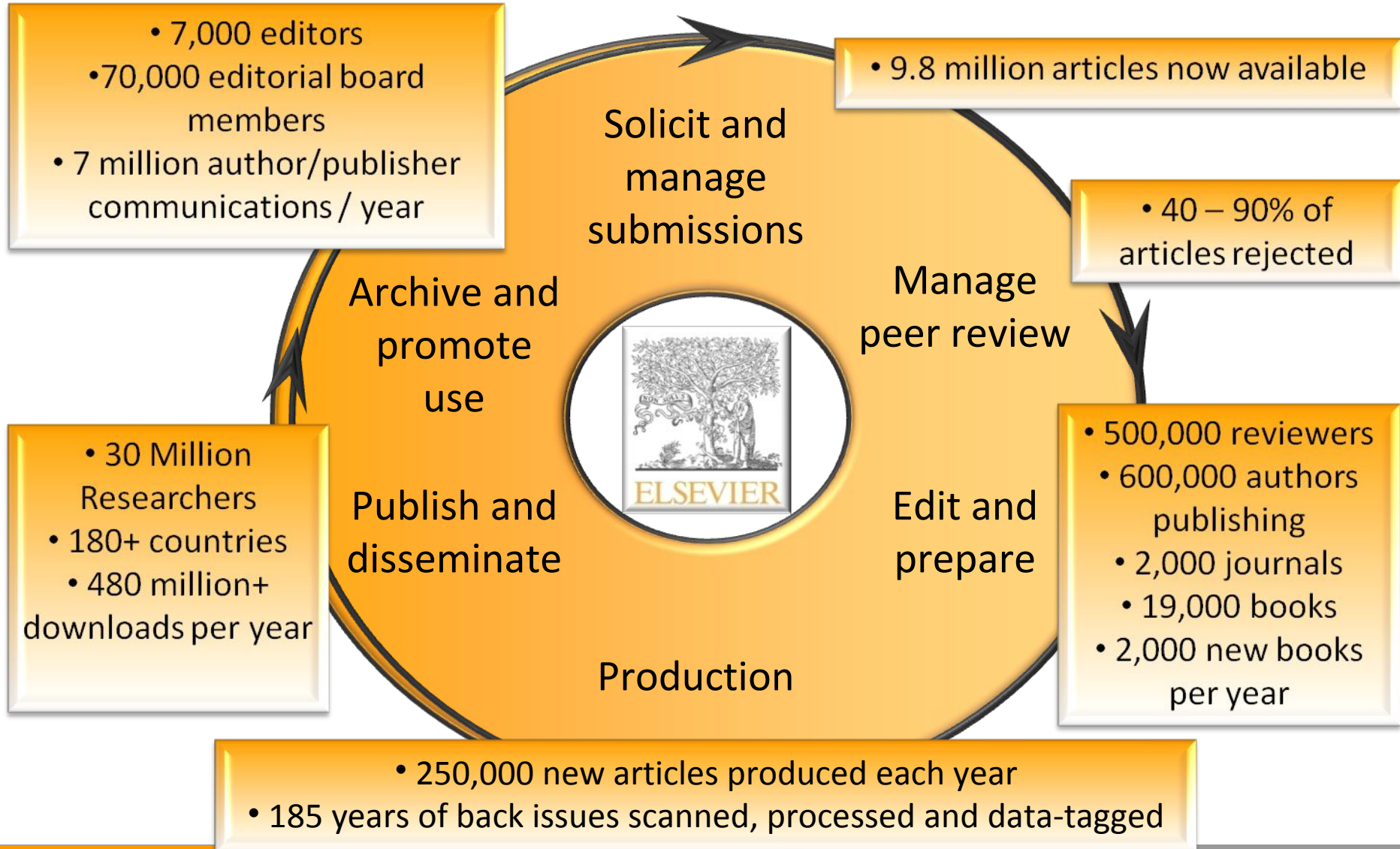


# How publishing has changed over time

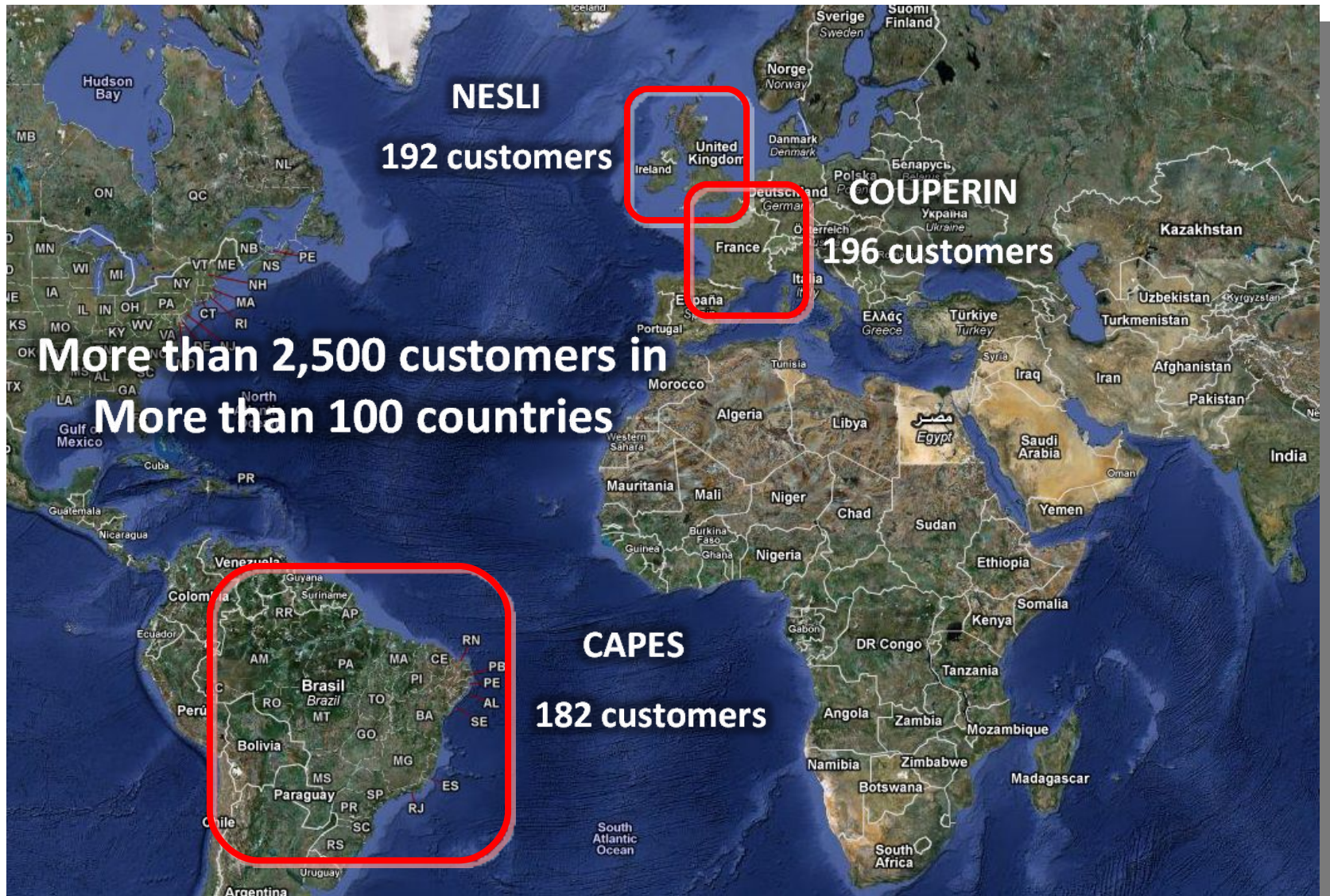




# Elsevier has expanded

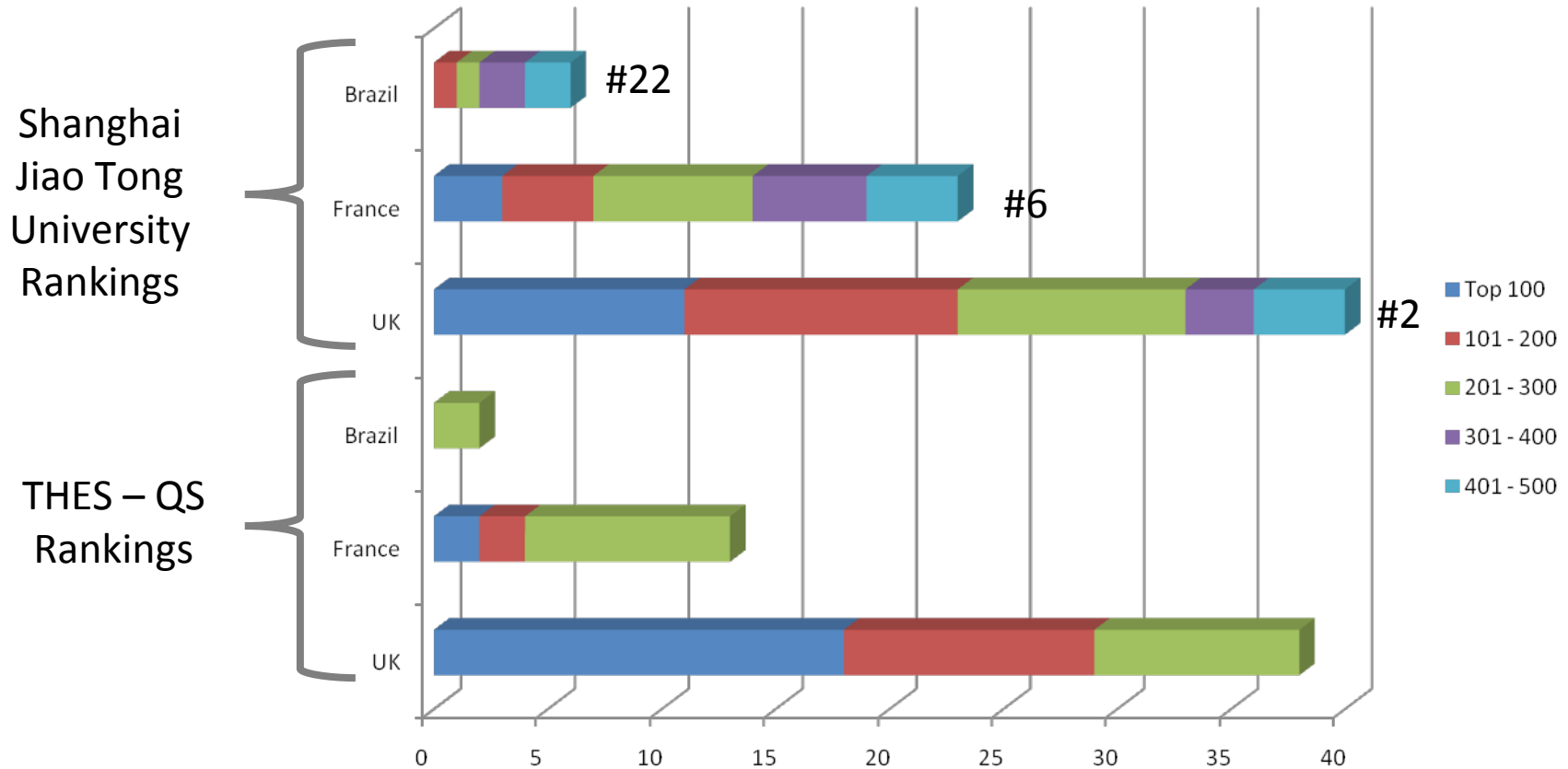


# As have our customers





## What do the rankings look like in 2009?



- Both the UK and France are ranked far above Brazil in both ranking scales
- Brazil is not ranked in the top 200 Universities in the THES

# When you look closer, Brazil has the highest population, but lowest GDP out of the three.

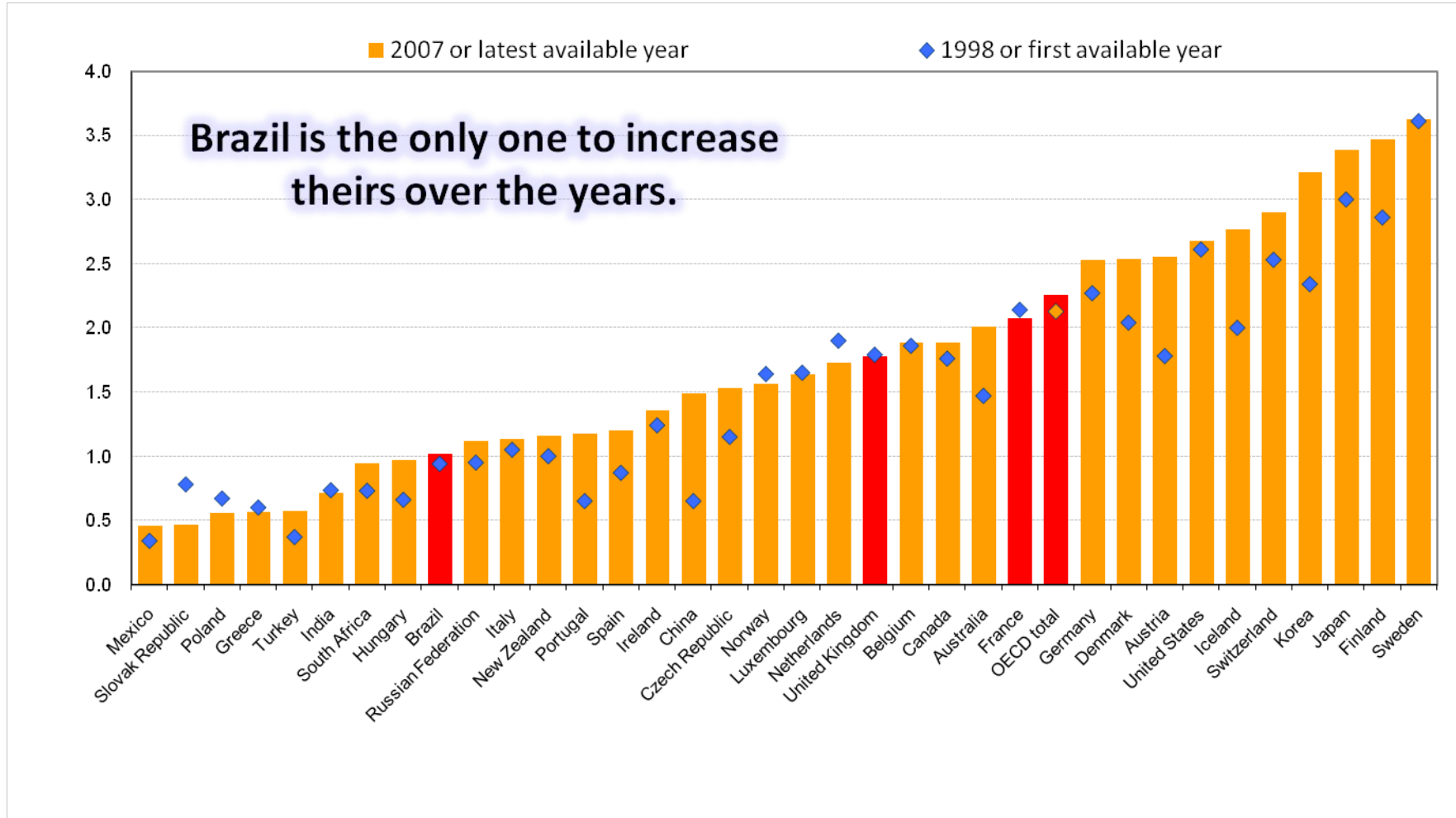
Percentage Distribution of Top Universities by Country with Their Share of Global Population and Gross Domestic Product (GDP)

Country	% of Top 100	% of Top 500	% of GDP	% of Population	Rank
United States	55.00%	30.30%	23.60%	4.50%	1
United Kingdom	11.00%	8.00%	4.40%	0.90%	2
Germany	5.00%	8.00%	6.10%	1.20%	3
Japan	5.00%	6.20%	8.20%	1.90%	4
Canada	4.00%	4.40%	2.30%	0.50%	5
France	3.00%	4.60%	4.70%	0.90%	6
Australia	3.00%	3.40%	1.70%	0.30%	7
Sweden	3.00%	2.20%	0.80%	0.10%	8
Switzerland	3.00%	1.60%	0.80%	0.10%	9
Brazil		1.20%	2.70%	2.90%	22

Shanghai Jiao Tong University Rankings

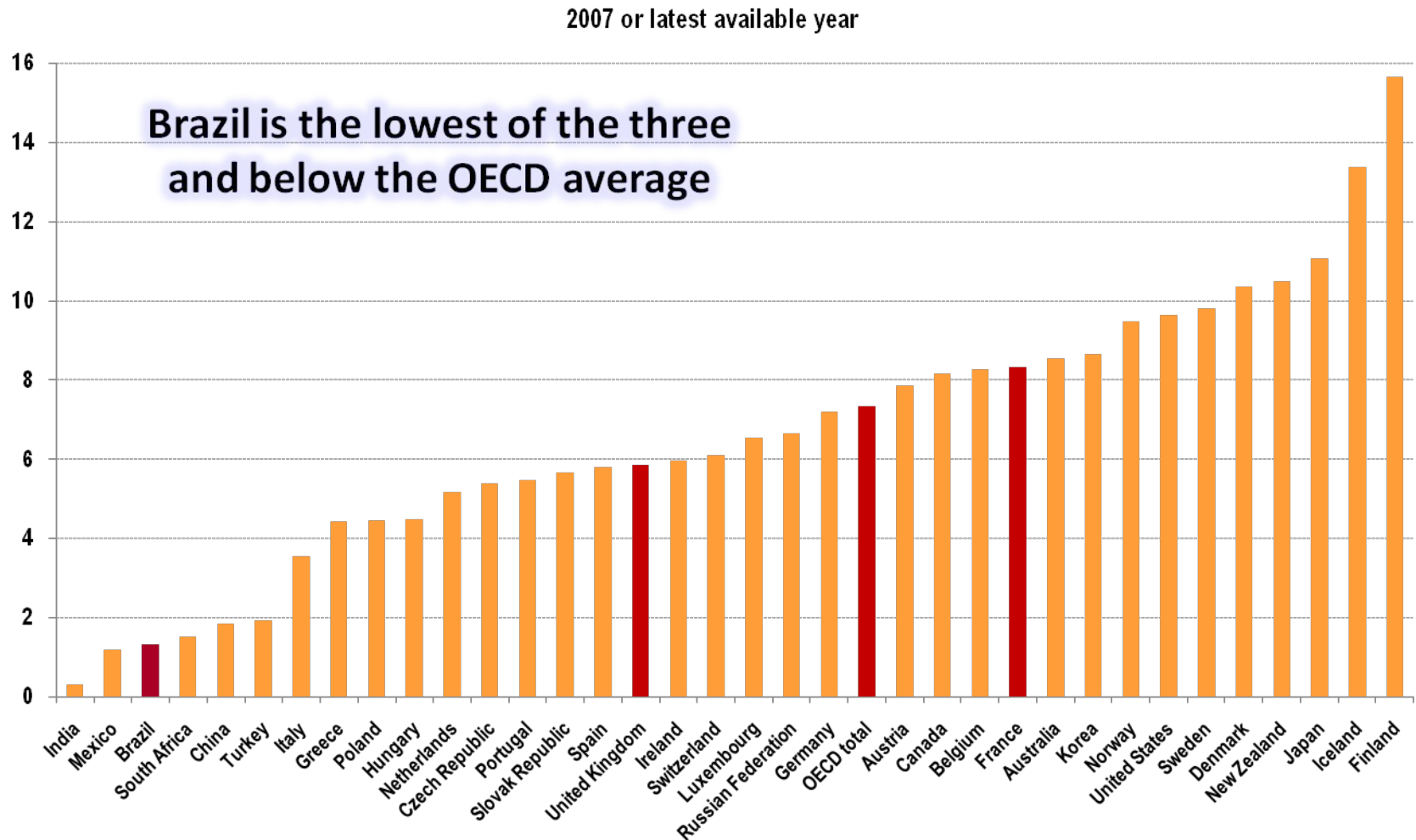


# Gross Domestic Expenditure on R&D as a percentage of GDP



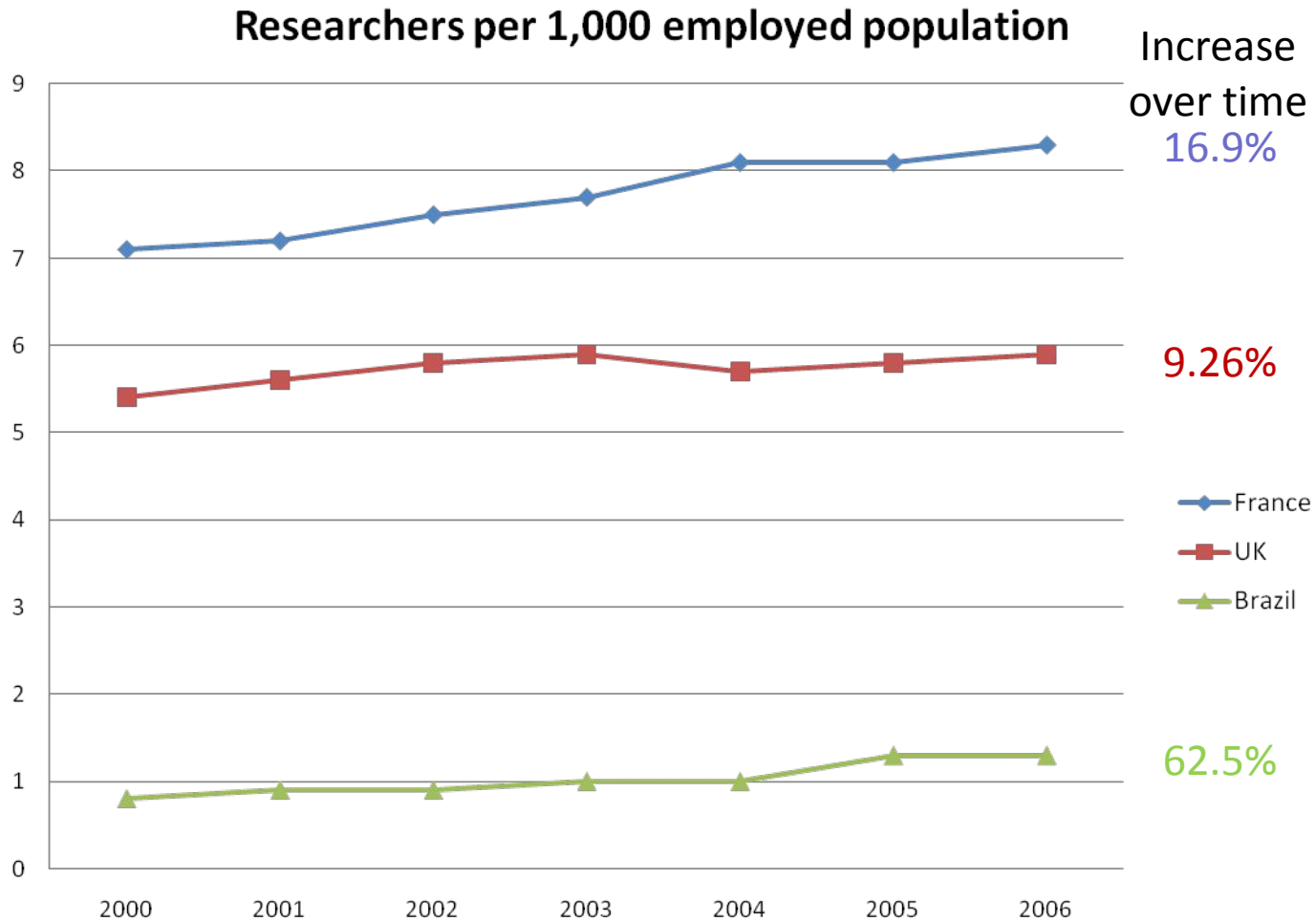
Source: OECD Factbook 2009 - <http://stats.oecd.org/> - July 2009

# The number of researchers per 1000 employed population – an overview









Source: OECD Factbook 2009 - <http://stats.oecd.org/> - July 2009

## ...but Brazil has invested heavily in new researchers



## In summary

	UK	France	Brazil
Ranking	1	2	3
Population	2=	2=	1
GERD spend	2 	1 	3 
Researchers / population	2 	1 	3 

Although Brazil is lower in the rankings than the UK and France, but they are providing the resources to move upwards!

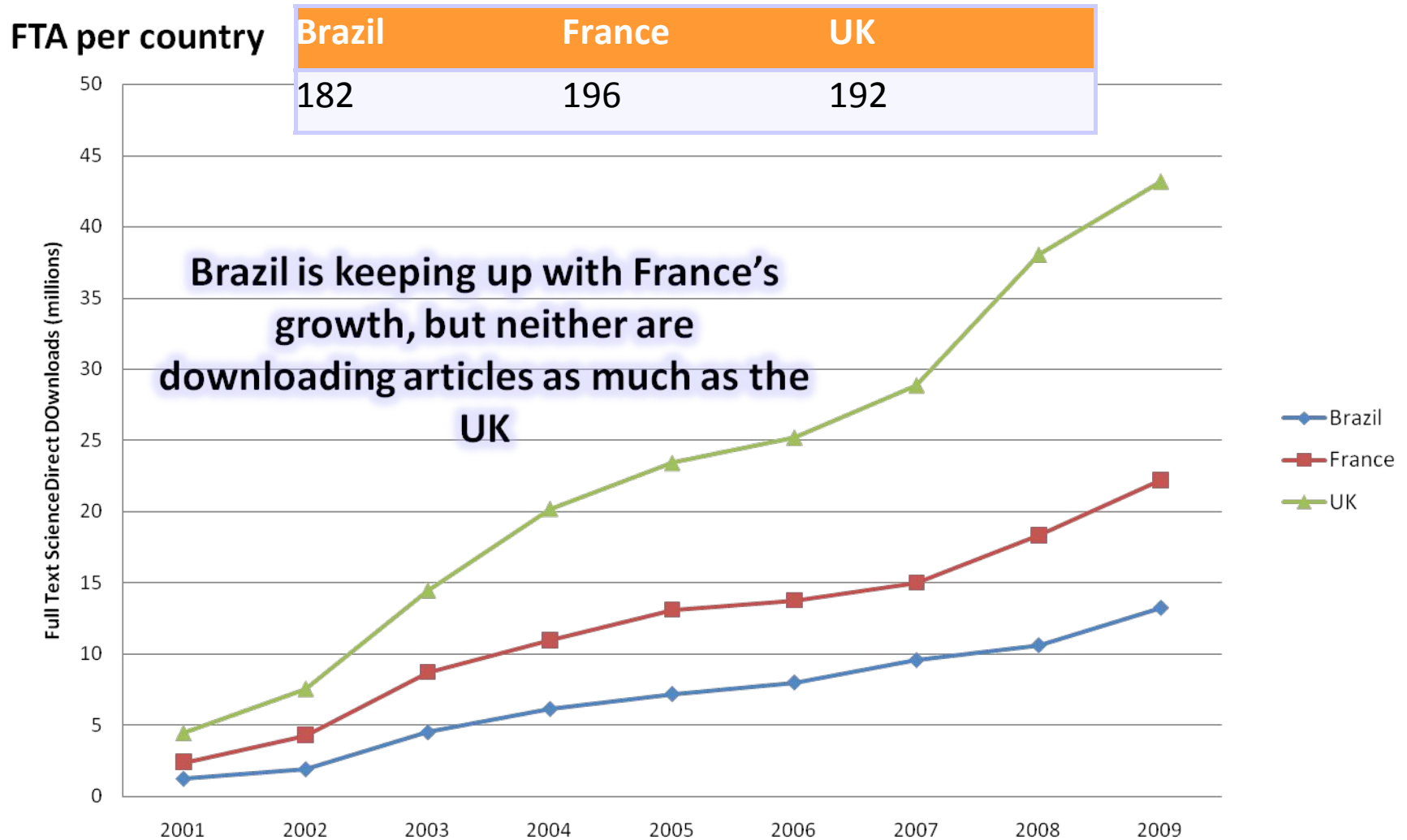




**What sort of articles are being produced from all of these electronic resources?**

# What are their usage trends?

Number of ScienceDirect customers in each country (2009)



# How do they rank in article output (1996 – 2007)?

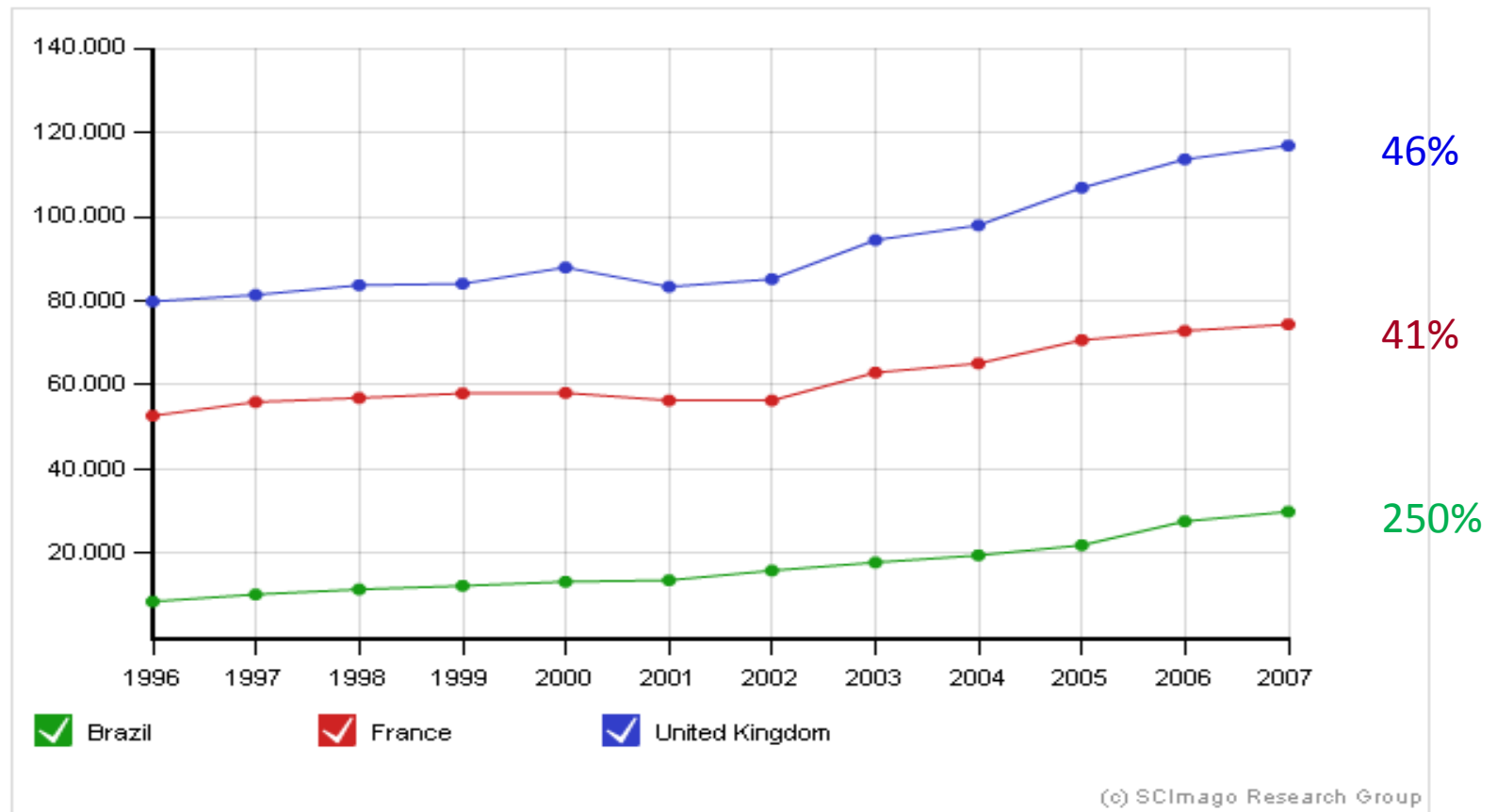
Rank	Country	Publications	Citations per Publication
1	United States	3,916,572	16.62
2	Japan	1,117,198	9.71
3	United Kingdom	1,114,601	14.22
4	Germany	1,023,306	12.9
5	China	984,773	4.32
6	France	739,554	12.36
7	Canada	557,928	14.26
8	Italy	541,016	11.79
9	Spain	393,842	10.56
10	Russian Federation	371,879	4.19
17	Brazil	201,184	7.55
		Average	10.77

The output rankings match their usage positions in the previous slide.

# How do they compare against each other for article output?

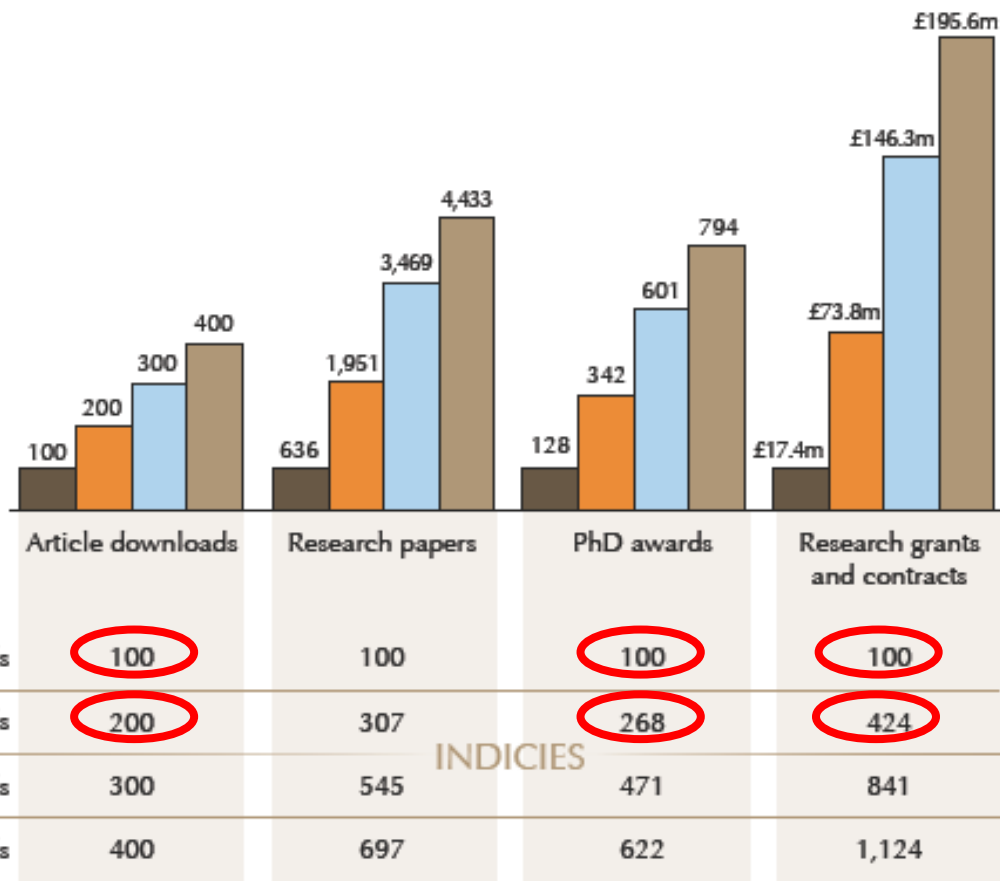


- Documents
- Citable Documents
- Cites
- Self Cites
- Cites per Document
- (Cites-Self cites) per Document
- H Index
- % cited documents
- International collaboration





# The study by University College London confirms the strong correlation between the use of electronic journals, scientific publications and obtaining funding



“A doubling of downloads, 1 to 2 million, is associated with a statistically significant changes in research productivity - without necessarily based on a cause and effect ”

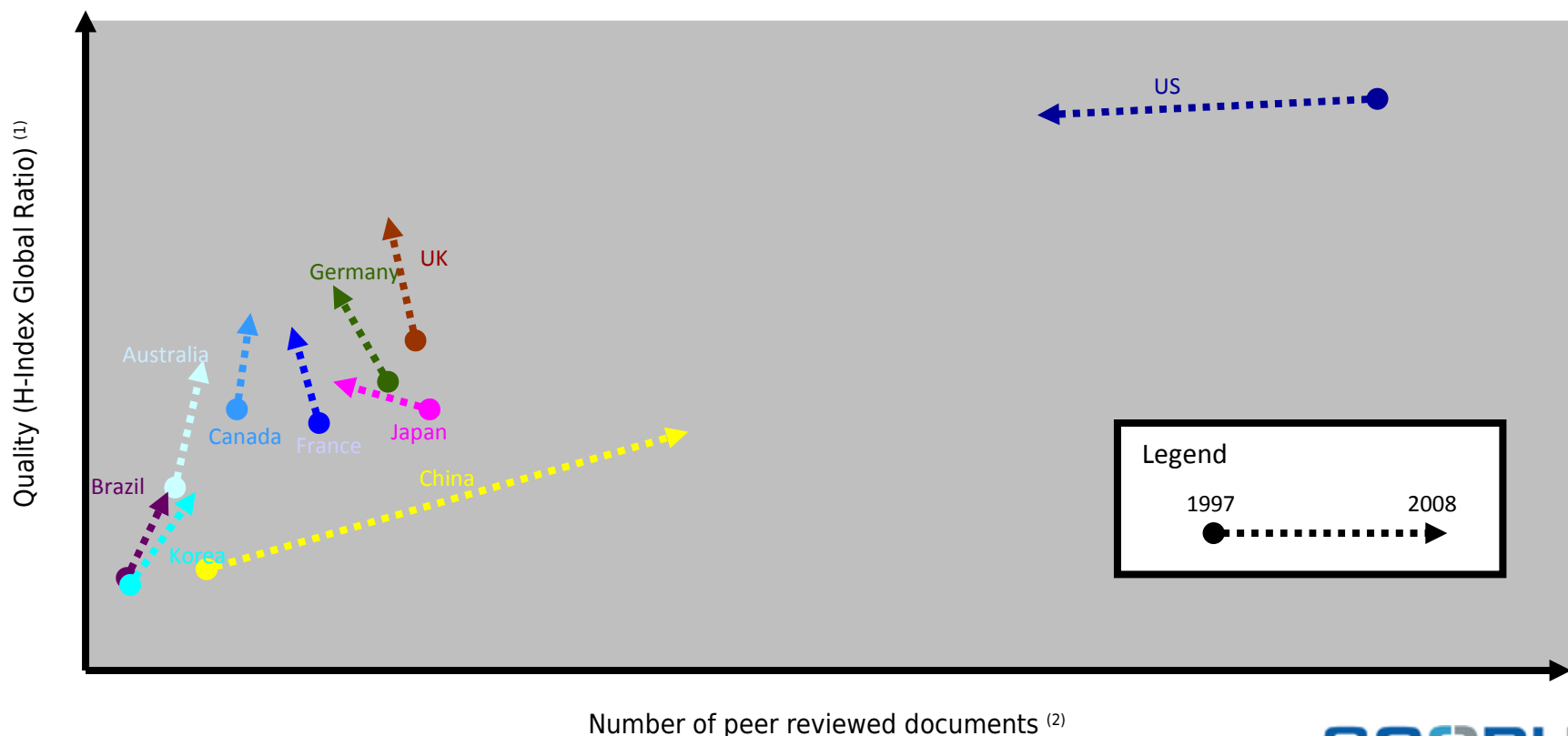
Publications + 207%  
 PhD awards + 168%  
 Research grants and revenue from development contracts + 324%

An even stronger growth with a greater use of resources

“Electronic Journals: Their use value and impact. Research Information Network Report

# The quality of French publications has increased whilst the quantity has decreased between 1997 and 2008

Brazil is growing rapidly on its quality and quantity. France & UK have lost in relative market share, but increased in quality.



SCOPUS

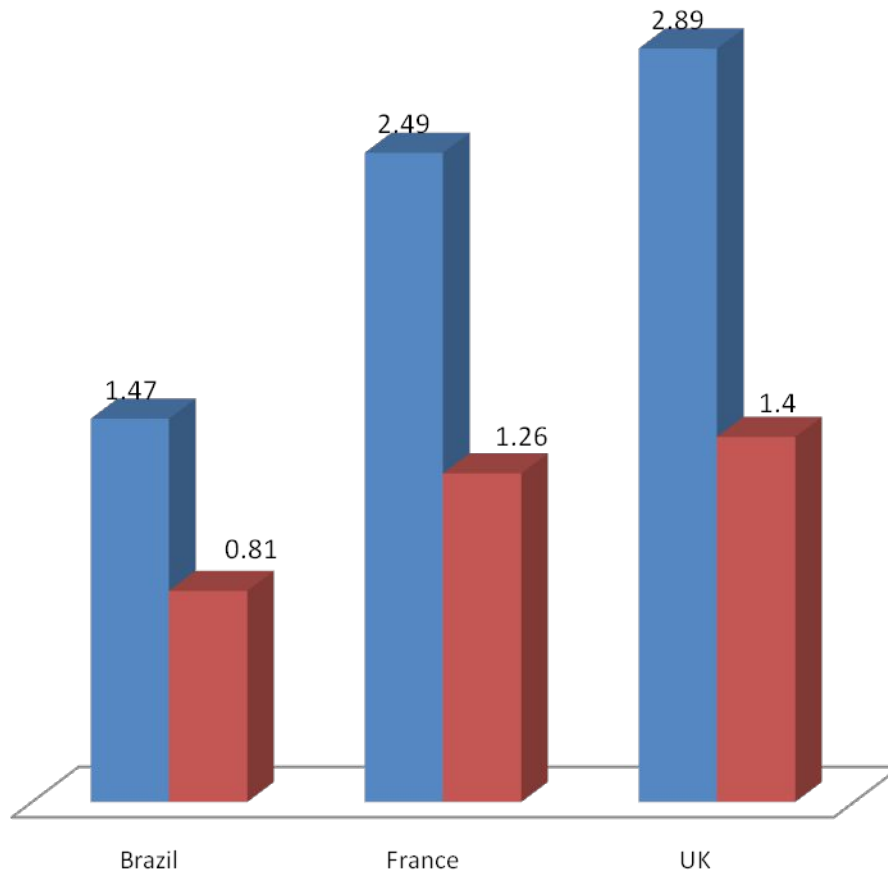
Notes: (1) Quality of Docs (H-Index Global ratio): Country H-index / global H-index  
(2) Share of peer reviewed Docs: Number of peer reviewed docs from each country / global

Source: Scopus

# This is echoed in the average citations and Field weighted impact for each country

## Articles published in 2004 - 2006

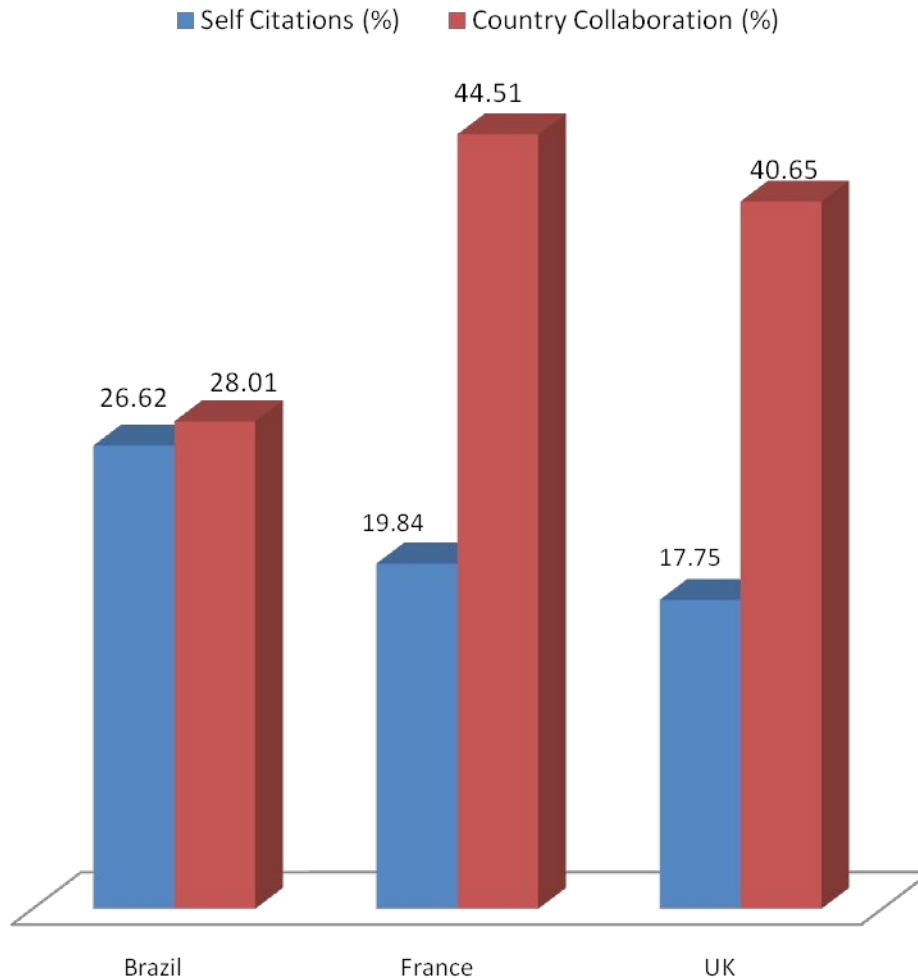
■ Average citations ■ Field Weighted Impact



The UK is leading both countries when we look at the impact of the research undertaken.

# ...and how often they cite themselves and collaborate with other countries.

## Articles published in 2004 - 2006



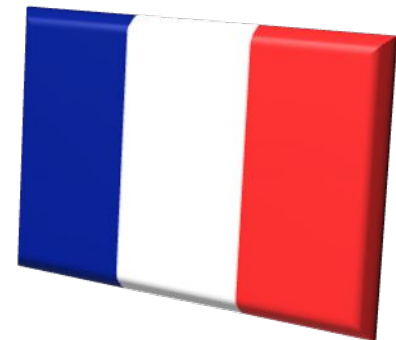
Being cited outside of your own country and collaborating internationally gives an indication as to the scope of the research being undertaken.



## In Summary

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- Brazil is investing in more researchers and providing proportionally more money for them than the UK and France
- Although there is still a gap, Brazil is catching up with both France and the UK in terms of research output and quality





**How are the country policies  
affecting research?**

# UK - Research Assessment

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- The Higher Education Funding Council for England (HEFCE) is working to develop new arrangements for the assessment and funding of research.



- The new arrangements - the Research Excellence Framework (REF) - will be introduced 5 years after the 2008 Research Assessment Exercise (RAE) in 2013.

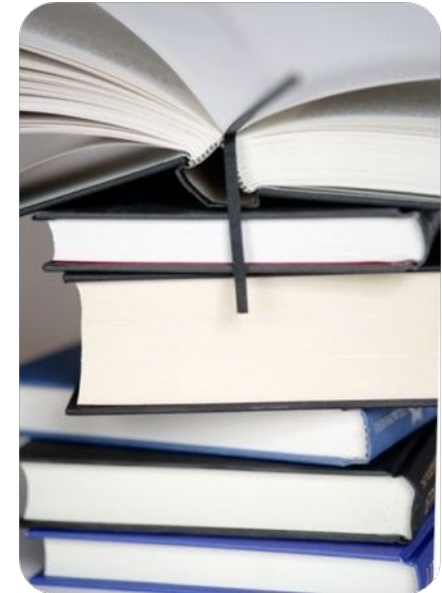
- Assessment will combine quantitative indicators - including [bibliometric indicators](#) wherever these are appropriate - and expert review.



# Research Assessment: what does it mean?

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- Academics have 5 years to prepare for the next evaluation
- REF appears to be moving in the direction of using also metrics to measure performance for STM areas
- Strong possibility of author based metrics whereby selection of top papers (most highly cited) of an author are assessed
- Performance linked to funding approach may affect writing behaviour of researchers in the next 5 years:
  - Drive to publish in most highly cited journals
  - Possible high push to get published in the next 2 years in order to pick up citations in time for 2013

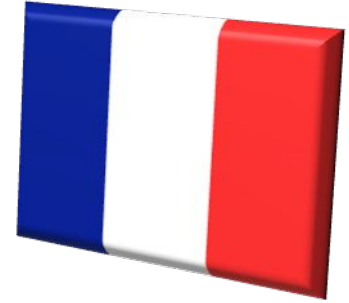


## France - Research frame

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The research budget priority is increasing according to governmental sources

- Reforms to organizations
- Rewarding excellence laboratories
- Centres of Excellence awards, contracts of objectives, national priorities
- Promoting environmental research laboratories
- Develop the attractiveness of careers
- Autonomous University law



# Brazil

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## General points

- Central funded consortia CAPES
- Access for Brazilian Universities and research centres
- Large investments e-resources (currently >1% GDP)

## Evaluation system:

<http://www.capes.gov.br/avaliacao/avaliacao-da-pos-graduacao>

- Tri-annual evaluation system
- Gives high scores to publication on local journals
- Uses Scopus data for research evaluation
- To become a member institution it has to qualify on CAPES' quality ranking for post-grad programs
- This ranking allows to allocate more resources to top-ranked programs and has the power to shut down low quality programs
- Tri-annual evaluation process is very well structured and has the power to influence directions of research





**How are measurements going to happen in the future?**



# The options

- CWTS Science Maps
- National Science Indicators

For all of these products the data comes from one of two platforms

- SciVal Spotlight
- SciVal Governor
- Scimago



# What is SciVal Governor?

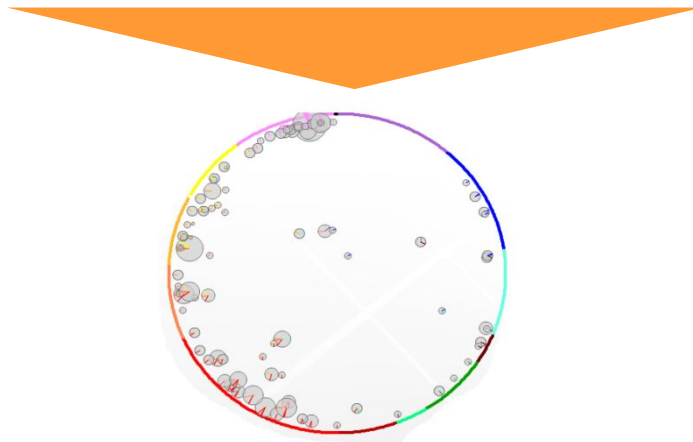


SciVal Governor, a custom web solution to identify the distinctive capabilities of a country and adjust policy decisions on research

SciVal Governor is based on Scopus data:

An extensive content, multi-disciplinary data from Scopus, which quotes:

- A correspondence between authors and their institutions, author and source profiles
- A bottom-up aggregation of data research, starting from a classification made from articles

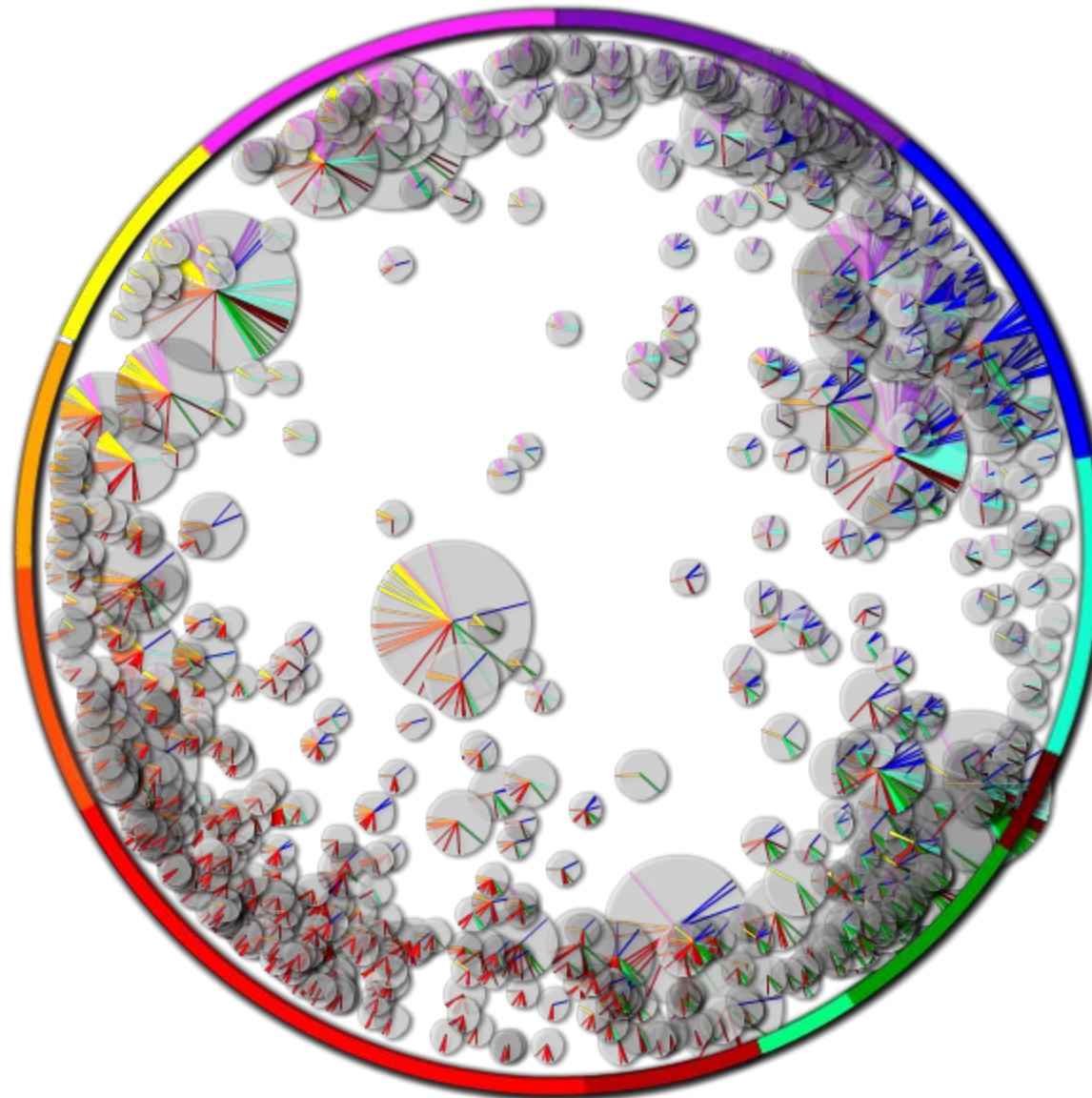


# National Maps of Brazil, France and the UK

Brazil

France

UK



- Math & Physics
- Chemistry
- Engineering
- Earth Sciences
- Biology
- Biotechnology
- Infectious Diseases
- Medical Specialities
- Health Sciences
- Brain Research
- Humanities
- Social Sciences
- Computer Science
- Other

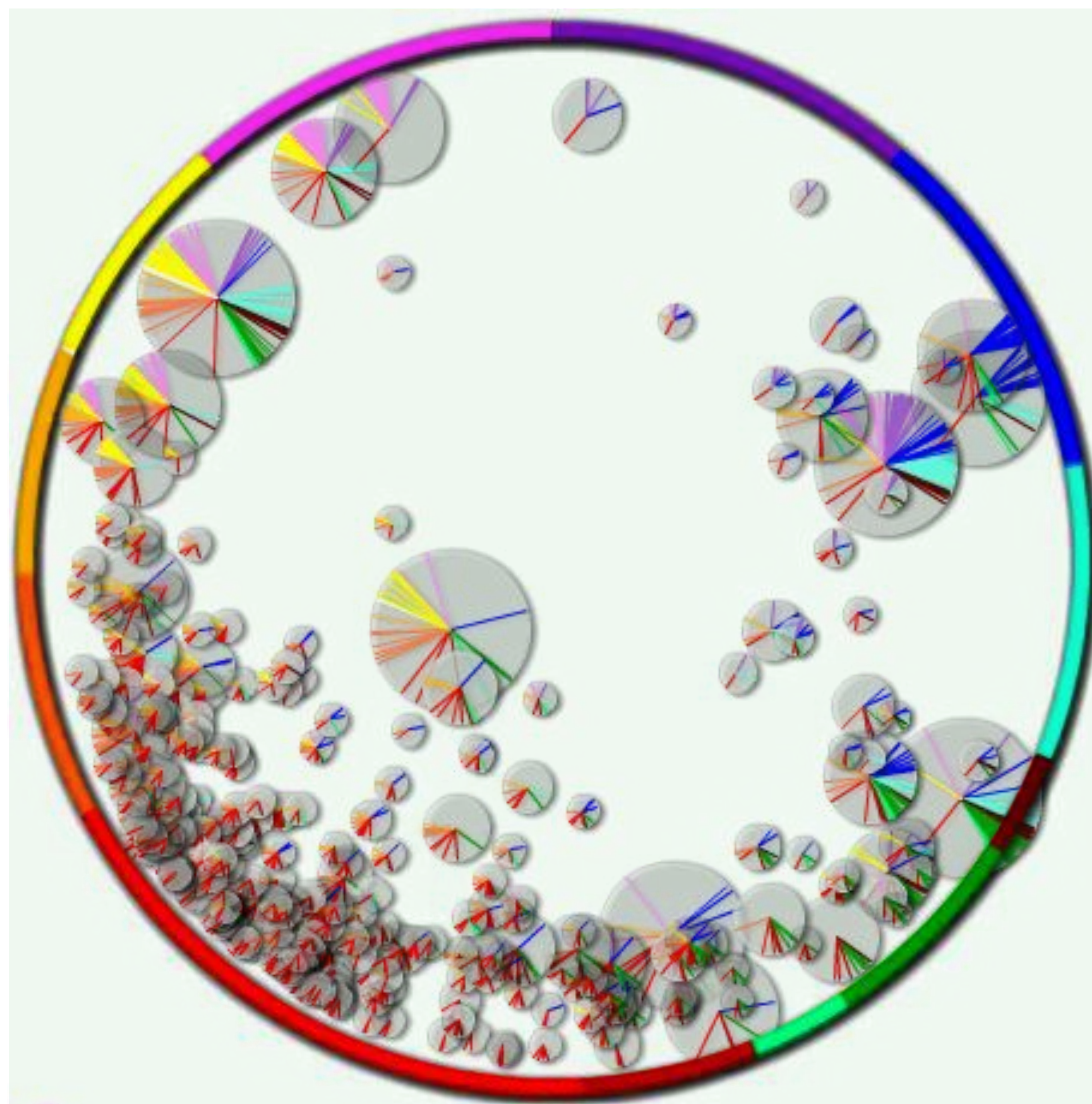


# National Maps of Brazil, France and the UK – Medical Specialities

Brazil

France

UK



- Math & Physics
- Chemistry
- Engineering
- Earth Sciences
- Biology
- Biotechnology
- Infectious Diseases
- Medical Specialities
- Health Sciences
- Brain Research
- Humanities
- Social Sciences
- Computer Science
- Other



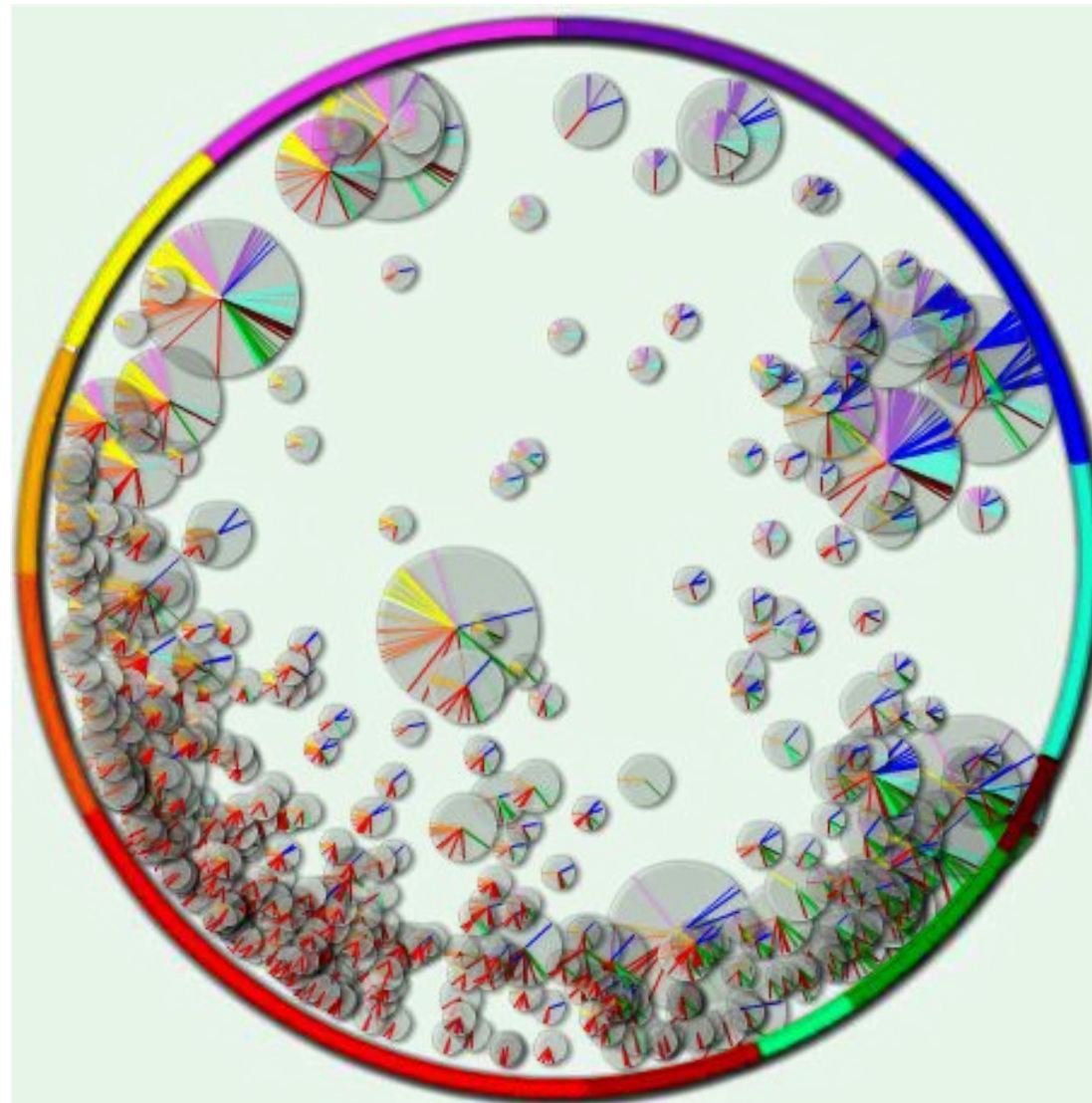


# National Maps of Brazil, France and the UK – Medical Specialities, Infectious Diseases, Health Sciences & Brain Research

Brazil

France

UK

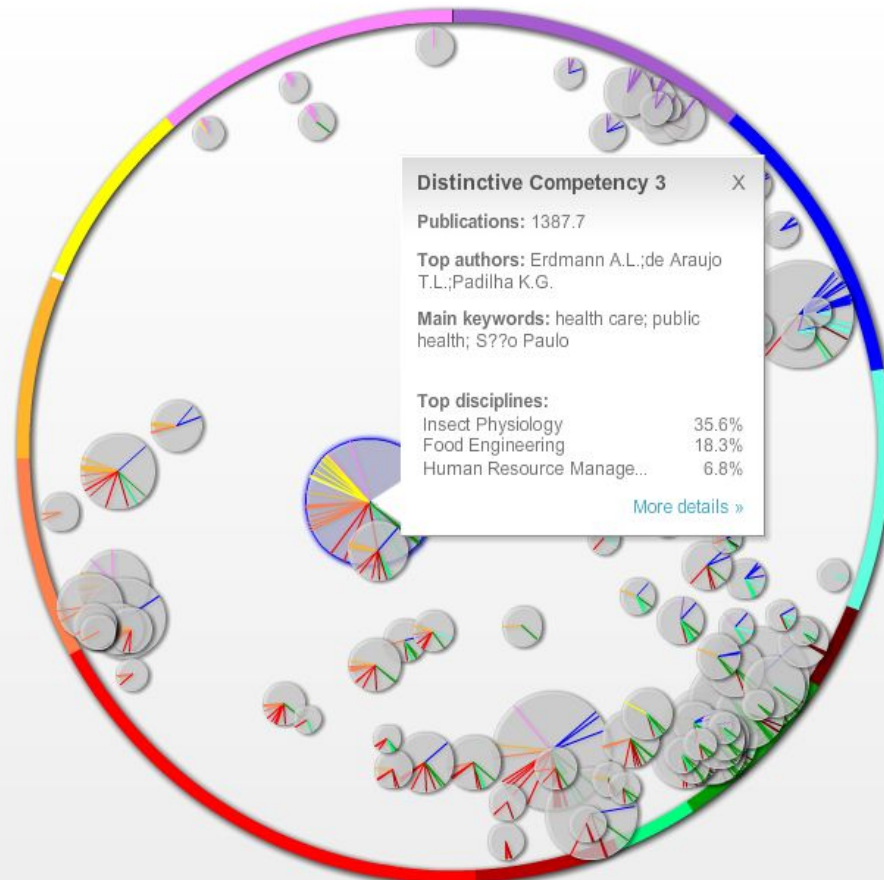


- Math & Physics
- Chemistry
- Engineering
- Earth Sciences
- Biology
- Biotechnology
- Infectious Diseases
- Medical Specialities
- Health Sciences
- Brain Research
- Humanities
- Social Sciences
- Computer Science
- Other



Competencies

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**Distinctive Competency 3** X

**Publications:** 1387.7

**Top authors:** Erdmann A.L.; de Araujo T.L.; Padilha K.G.

**Main keywords:** health care; public health; S?o Paulo

**Top disciplines:**

Insect Physiology	35.6%
Food Engineering	18.3%
Human Resource Manage...	6.8%

[More details »](#)

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Global 2008

Subject areas

[Filter](#) [Browse](#)

- Math & Physics
- Chemistry
- Engineering
- Earth Sciences
- Biology
- Biotechnology
- Infectious Diseases
- Medical Specialities
- Health Sciences
- Brain Research
- Humanities
- Social Sciences
- Computer Science
- Other

[View high-level competencies »](#)

Legend

[How to read this map »](#)

The large circle represents the scientific world and the colors refer to different subject areas. Each circle on the map represents a Competency. These Competencies are defined by clusters of articles.

- The larger the circle, the more articles exist in this Competency.
- Circles closer to the center of the map are more interdisciplinary.

- Competencies**
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  - 31 (DC)

Name	Fractions
Erdmann A.L.	8.6
de Araujo T.L.	8.2
Padilha K.G.	7.9
Ximenes L.B.	5.3
Lopes M.V.D.O.	5.2

[Go to authors](#)

**Top disciplines**

Name	Fractions	% of total
Insect Physiology	490.5	35.6%
Food Engineering	251.5	18.3%
Human Resource Management	93.6	6.8%
Nursing Education	90.0	6.5%
Nursing Specialists	78.8	5.7%

[View all](#)

**Top journals**

Name	Fractions (% of total)	SJR	SNIP
Ciencia E Saude Coletiva	99.5 (3.1%)	1.234	5.678
Cadernos De Saude Publica	89.9 (2.8%)	1.234	5.678
Revista Latino-americana De Enfermagem	86.7 (2.7%)	1.234	5.678
Revista Da Escola De Enfermagem	80.2 (2.5%)	1.234	5.678
Revista De Saude Publica	73.8 (2.3%)	1.234	5.678

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**Main keywords**

- health care
  - public health
  - S??o Paulo
  - health services
  - health professionals
- [View 100](#)



**Competencies**

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**Distinctive Competency #3**

Main keywords: health care; public health; S??o Paulo

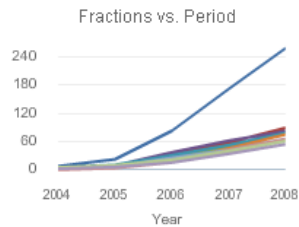
 Compare to region **Global** ▼

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General Rank Lists Visualizations

View top institutions:

- All institutions
- Brazil institutions

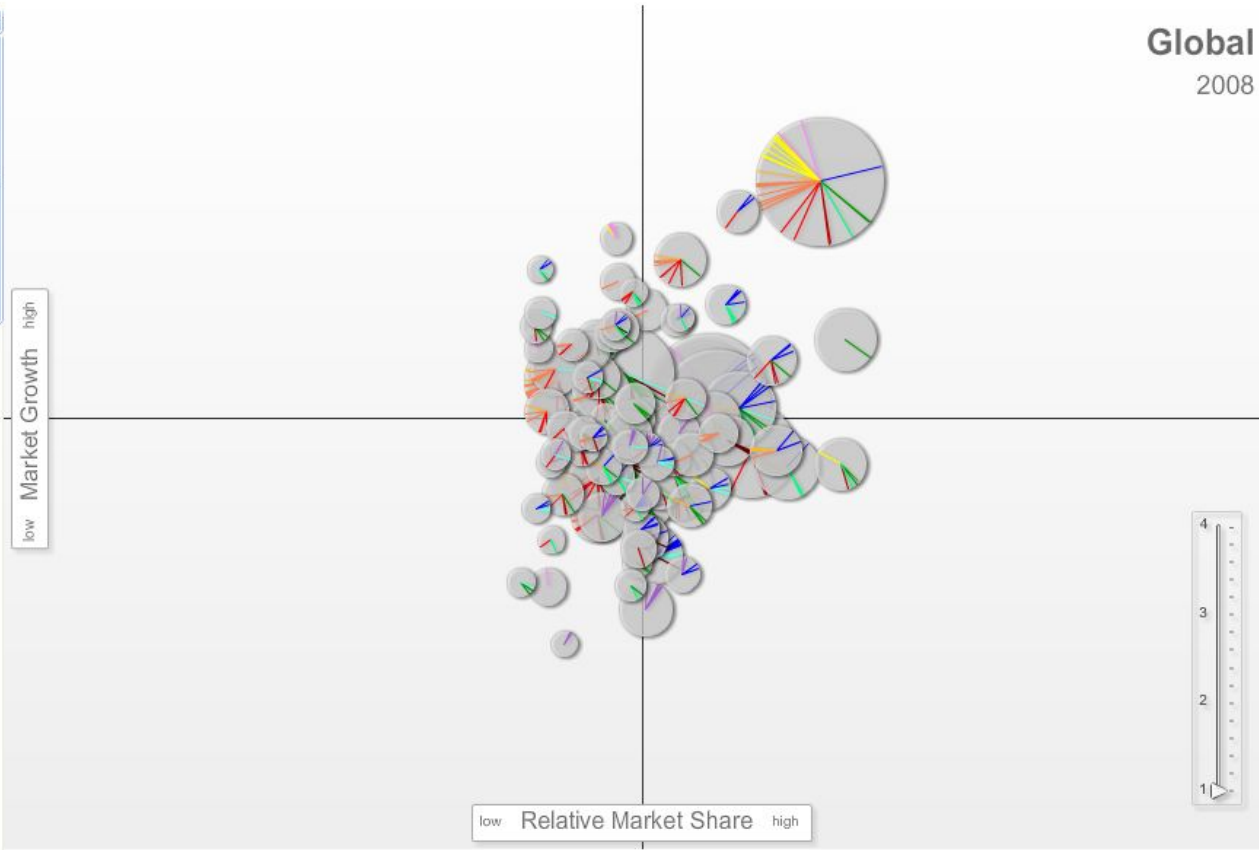

**All institutions**

Institution (country)	Fractions	Articles	RL	SotA	Cited
1. University of Sao Paulo BR	262.85	381	1.3	1.5	110.0
2. Universidade Federal do Rio Grande BR	89.88	134	0.1	1.4	37.8
3. Instituto Oswaldo Cruz BR	83.01	125	0.3	0.3	42.5
4. Universidade Estadual de Campinas BR	82.38	125	0.5	0.3	45.6
5. Universidade Federal do Rio de Janeiro BR	78.47	116	0.0	-0.2	26.4
6. Universidade Federal de Santa Catarina BR	77.09	97	0.0	-0.6	6.9
7. Universidade Federal de Minas Gerais BR	66.12	116	0.8	1.9	86.6
8. Universidade do Estado do Rio de Janeiro BR	65.56	94	0.2	0.2	17.7
9. Universidade Federal do Ceara BR	61.88	75	0.2	2.6	41.6
10. Universidade Federal de Sao Paulo BR	55.35	88	0.3	0.8	58.8

[Print preview](#)

**Competencies**

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**Global**  
2008

**Subject areas**

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- Math & Physics
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- Biology
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- Infectious Diseases
- Medical Specialities
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- Social Sciences
- Computer Science
- Other

[View high-level competencies >](#)

**Legend**

[How to read this map >](#)

Each circle on the matrix represents a Competency. These Competencies are defined by clusters of articles.

- The larger the circle, the more articles exist in this Competency.
- The position on the x-axis of a circle is defined by the relative market share of the Competency.
- The position on the

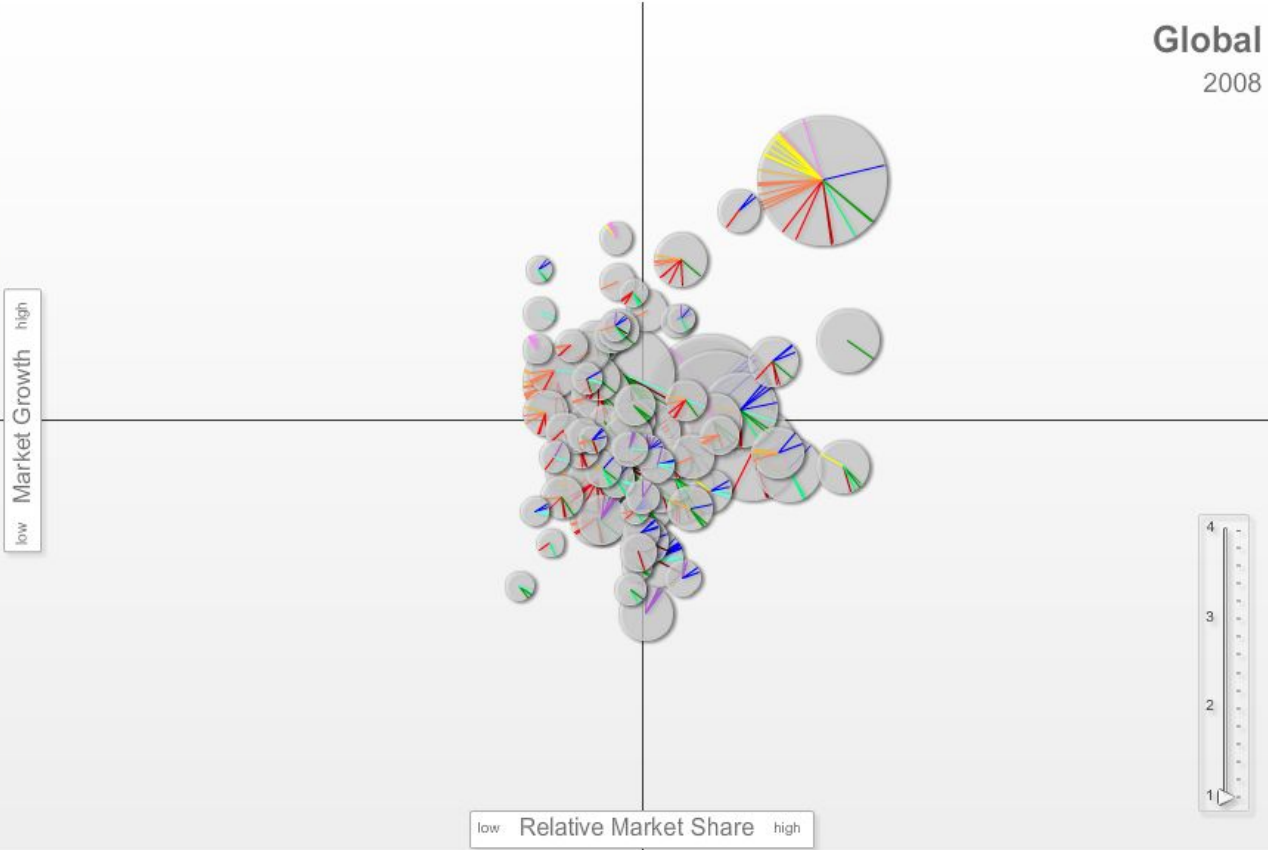
View **All Competencies** ▾

Automatically resize circle sizes to normalized sizes

[Export Image](#)

[Hide Column](#) »

- Competencies**
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**Global**  
2008

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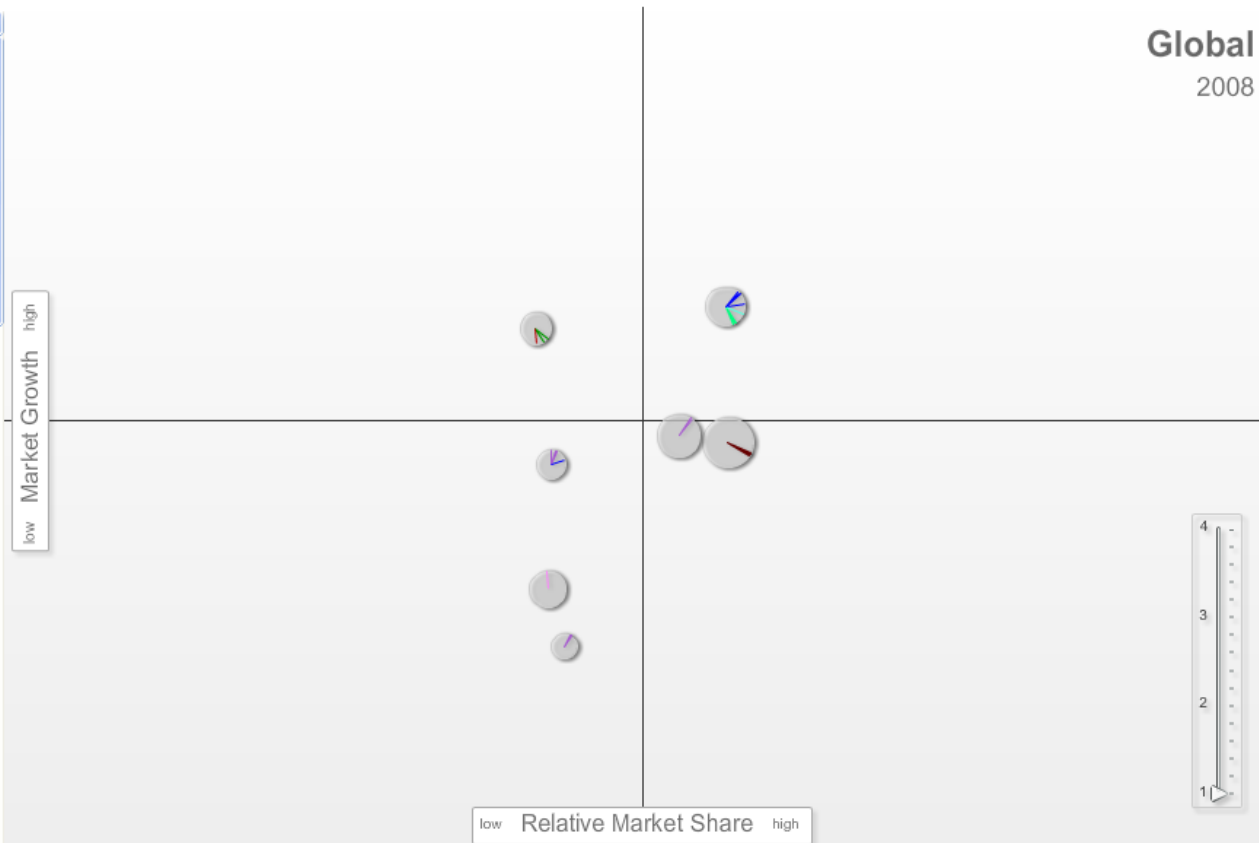
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View **Increasing market share only** ▾

Automatically resize circle sizes to normalized sizes

Competencies

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View **Decreasing market share only** ▾  
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**Subject areas**

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- The position on the

Data: [Download as CSV](#) | [Print](#)

Competencies	Market size	Growth	Article Share	Growth	Rank	RAS	RL	SotA
1 (DC)	5,445.1	7.21% ▲	969.6 (17.81%)	0.90% ▲	1	1.44	1.27	0.53
2 (DC)	4,057.4	7.34% ▲	1,154.9 (28.46%)	2.02% ▲	1	1.47	1.12	-0.57
3 (DC)	3,209.9	19.82% ▲	1,387.7 (43.23%)	12.37% ▲	1	2.70	0.71	1.07
4 (EC)	3,313.1	8.03% ▲	401.8 (12.13%)	2.03% ▲	2	0.65	0.19	-0.76
5 (DC)	3,300.5	6.74% ▲	948.8 (28.75%)	4.45% ▲	1	1.54	0.78	1.13
6 (DC)	3,100.4	8.44% ▲	802.8 (25.89%)	2.25% ▲	2	0.93	0.58	0.90
7 (EC)	2,789.8	3.01% ▲	546.7 (19.60%)	2.14% ▲	2	0.76	0.48	1.18
8 (EC)	2,630.3	4.50% ▲	546.6 (20.78%)	2.09% ▲	2	0.81	0.22	-0.81
9 (DC)	2,221.9	3.86% ▲	709.6 (31.94%)	3.60% ▲	1	1.85	0.80	1.03
10 (EC)	2,317.6	2.03% ▲	348.1 (15.02%)	1.66% ▲	2	0.74	0.23	0.98
11 (EC)	2,251.9	1.93% ▲	469.9 (20.87%)	1.34% ▲	2	0.80	0.62	-0.57
12 (DC)	2,227.5	6.42% ▲	456.8 (20.51%)	2.14% ▲	1	1.74	1.47	-0.14
13 (DC)	2,059.7	3.31% ▲	386.0 (18.74%)	1.91% ▲	2	0.91	0.51	1.11
14 (DC)	1,899.1	-2.30% ▼	270.4 (14.24%)	1.11% ▲	1	1.09	1.54	0.95
15 (EC)	1,745.3	0.10% ▲	247.2 (14.16%)	1.63% ▲	2	0.81	0.44	0.02
16 (DC)	1,654.3	5.04% ▲	362.1 (21.89%)	2.47% ▲	1	1.05	0.92	0.58
17 (DC)	1,673.8	-5.55% ▼	241.0 (14.40%)	0.01% ▲	1	1.04	0.72	0.13
18 (EC)	1,613.2	3.14% ▲	288.2 (17.87%)	1.07% ▲	2	0.83	0.61	-1.17
19 (EC)	1,526.0	8.71% ▲	221.9 (14.54%)	1.09% ▲	2	0.64	0.36	-0.02
20 (EC)	1,553.0	2.28% ▲	290.0 (18.67%)	1.61% ▲	2	0.80	0.70	-1.70
21 (DC)	1,497.6	1.85% ▲	393.7 (26.29%)	4.00% ▲	1	1.24	0.48	0.98
22 (EC)	1,401.8	-0.06% ▼	192.5 (13.73%)	1.04% ▲	2	0.82	0.44	-0.71
23 (EC)	1,270.2	6.22% ▲	161.4 (12.71%)	1.38% ▲	2	0.61	0.21	1.28
24 (DC)	1,203.8	10.36% ▲	156.2 (12.98%)	0.63% ▲	2	0.80	1.01	0.16
25 (EC)	1,152.5	7.36% ▲	268.6 (23.31%)	2.06% ▲	2	0.82	0.57	-0.70
26 (DC)	1,090.4	0.48% ▲	146.2 (13.41%)	2.29% ▲	1	1.07	0.61	0.92
27 (DC)	1,087.1	5.50% ▲	146.9 (13.52%)	1.28% ▲	2	0.94	0.53	1.34
28 (DC)	1,055.5	5.71% ▲	255.0 (24.16%)	5.18% ▲	1	1.51	1.22	2.15
29 (DC)	1,015.4	-1.29% ▼	174.6 (17.19%)	0.25% ▲	1	1.04	1.05	0.90
30 (DC)	1,002.3	1.81% ▲	174.2 (17.38%)	1.65% ▲	1	1.13	0.46	0.47
31 (DC)	1,000.0	0.00%	170.4 (17.04%)	1.04%	1	1.00	0.24	0.14

[Hide Column](#) »

### Market Growth

Average growth over the last 5 years, using a 2-year sliding window.

### Article Share

Number of articles of your organization

### Article Share Growth

Average growth over the last 5 years, using a 2-year sliding window.

### Rank

The rank of the current institution within the Competencies calculated over the full 5 year window.

### RAS - Relative Article Share

Number of articles compared to the market leader for this region level. If you are the leader (ranked 1), the value is compared to the organization ranked #2.

### RL - Relative Reference Share

Number of highly cited articles compared to the market leader for this region level.. If you are the leader (ranked 1), the value is compared to the organization ranked #2.

### SotA - State of the Art

Number indicating the recency of work cited by your articles

# Scopus data being used by partners: governments and research agencies

## GOVERNMENT AGENCIES USE SCOPUS DATA

SCOPUS



Korea Institute of  
Science and Technology Information

- KISTI is using Scopus Custom Data to analyze the trend of science & technology with bibliometric method and the status of international joint research activities. KISTI found that **Scopus covers more comprehensive coverage than WOS and has well-organized data structure**, for example, good mapping between authors and their institutions



Institute for  
Research Information  
and Quality Assurance

- iFQ is using Scopus Custom Data to quantify German research output and evaluate the global impact. "We will work with Scopus for the **depth and international breadth** of its citation database," **Professor Stefan Hornbostel** of iFQ.
- "The **analytical capabilities** that the content provides will help us achieve our mission of supporting the German science system with carefully examined and relevant information feeding into policies that will allow Germany to continue to be a global scientific leader."



- The Australian Research Council (ARC) uses Scopus citation information for the Excellence in Research for Australia (ERA) initiative. Professor Sheil said. "ERA will **evaluate research in Australian higher education institutions** using a combination of indicators and expert review." When selecting Scopus, the ARC regarded the **coverage of relevant journals and potential costs to the sector.**" The Scopus team will work directly with institutions, to match publication records with unique article identifiers in the Scopus database."

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2

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# Thank you

Sources:

[www.scopus.com](http://www.scopus.com)

[www.sciencedirect.com](http://www.sciencedirect.com)

[www.scimagojr.com](http://www.scimagojr.com)

[www.arwu.org](http://www.arwu.org)

[www.topuniversities.com](http://www.topuniversities.com)

<http://stats.oecd.org/Index.aspx>

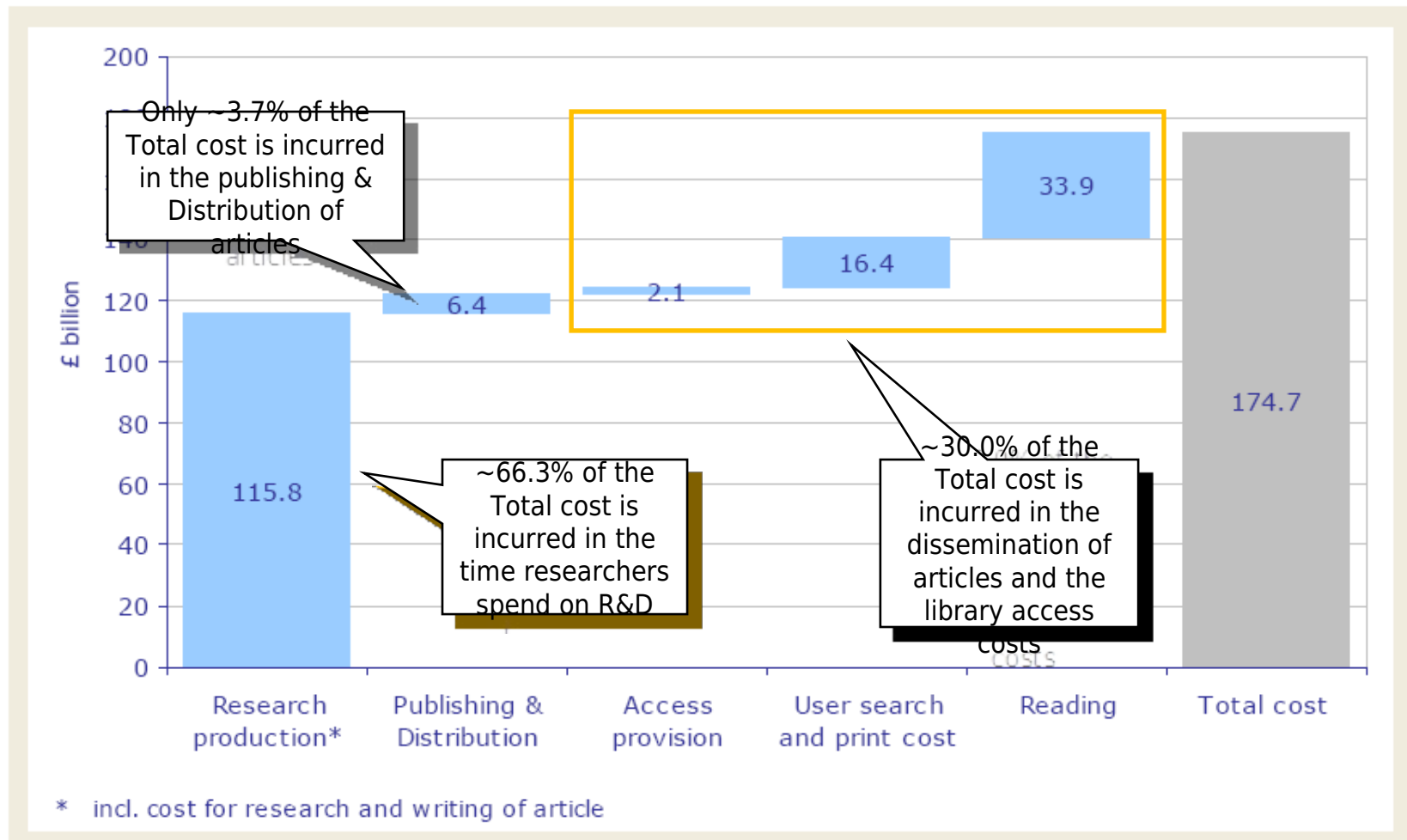


# Back up slides....

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# Le Research Information Network (RIN) estime la valeur total du processus de publication de la recherche à **£ 174.7 billion (~\$ 298.9 billion)**

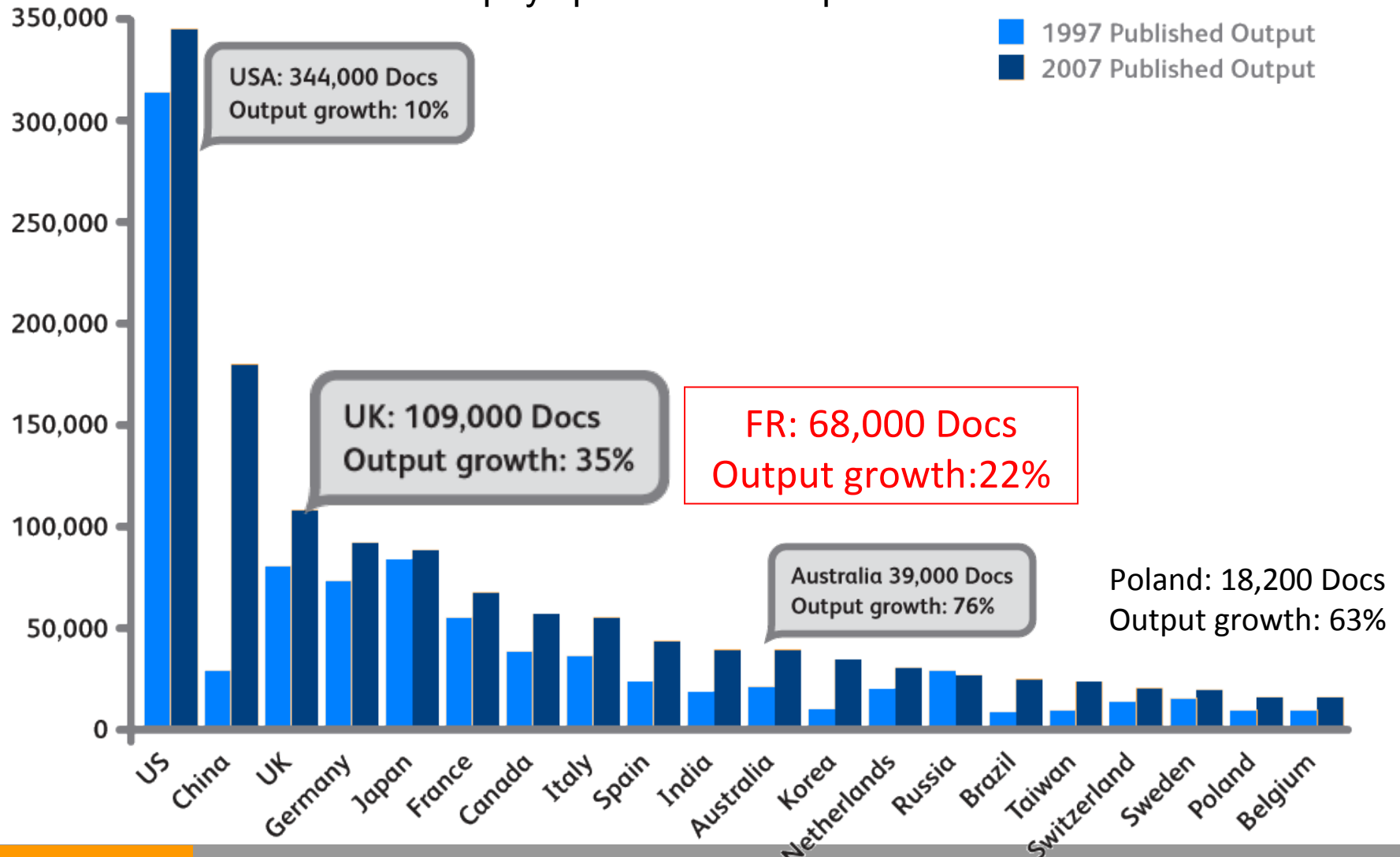
Figure 4.1: Total (system-wide) annual cost incurred in the global scholarly communications process, by value chain component



Source: Activities, costs and funding flows in scholarly communications, RIN May 2008, <http://www.rin.ac.uk/costs-funding-flows>

# Un contexte de compétition internationale accrue

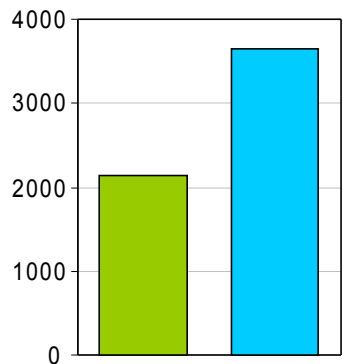
Classement des pays par volume de publications en 2007



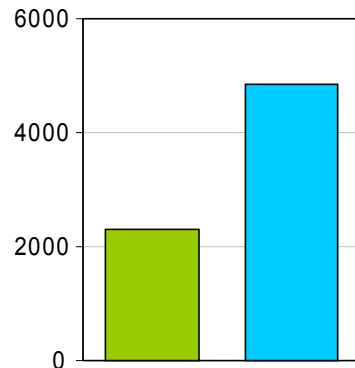
# Scopus : une large couverture par discipline...

9 300 versus 17 300 titres de revues

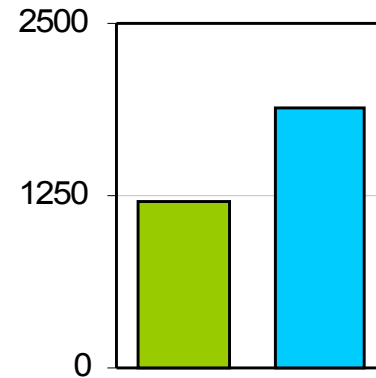
■ Nearest Competitor  
■ Scopus



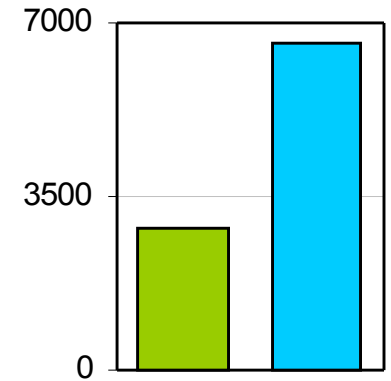
Physical, Chemical and Earth Sciences



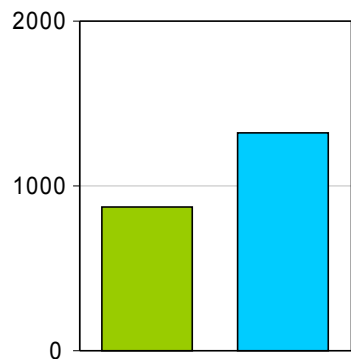
Engineering & environmental Sciences



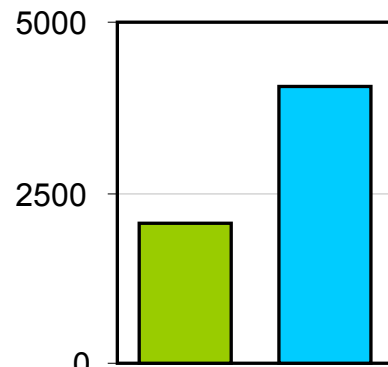
Mathematics, Information & Communication Sciences



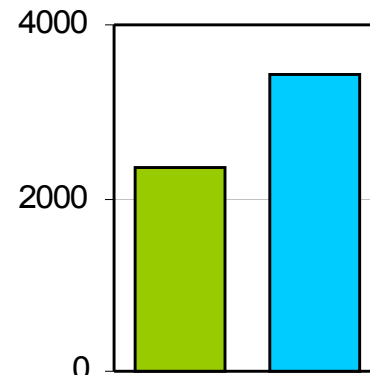
Biomedical & Clinical Research



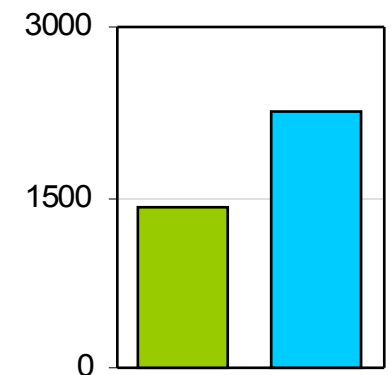
Humanities & creative arts



Social, Behavioural & Economic Sciences



Biological Sciences and Biotechnology



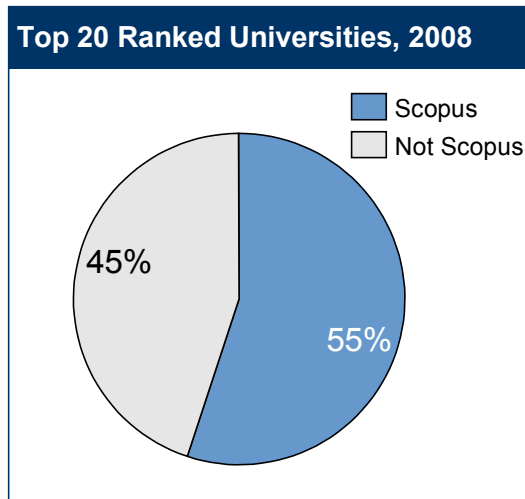
Public and Allied Health and Health Services



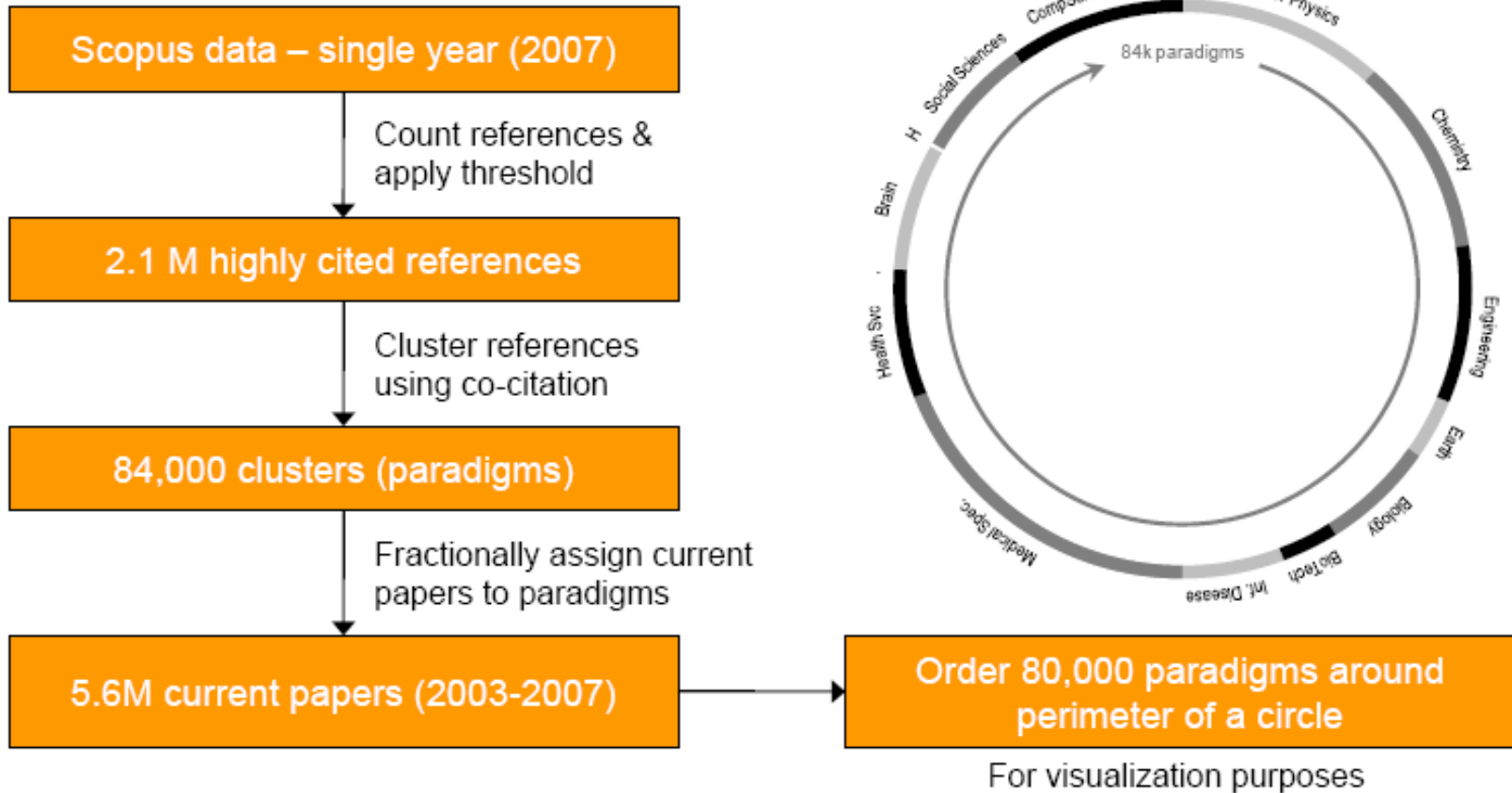
# L'adoption de Scopus par les institutions leaders

## LEADING RESEARCH INSTITUTIONS RELY ON SCOPUS

2008 Rank	Name of Institute	Country
1	Harvard University	US
2	Yale University	US
3	University of Cambridge	UK
4	University of Oxford	UK
5	California Institute of Technology	US
6	Imperial College London	UK
7	University College London	UK
8	University of Chicago	US
9	Massachusetts Institute of Technology	US
10	Columbia University	US
11	University of Pennsylvania	US
12	Princeton University	US
13	Johns Hopkins University	US
13	Duke University	US
15	Cornell University	US
16	Australian National University	Australia
17	Stanford University	US
18	University of Michigan	US
19	University of Tokyo	Japan
20	McGill University	Canada



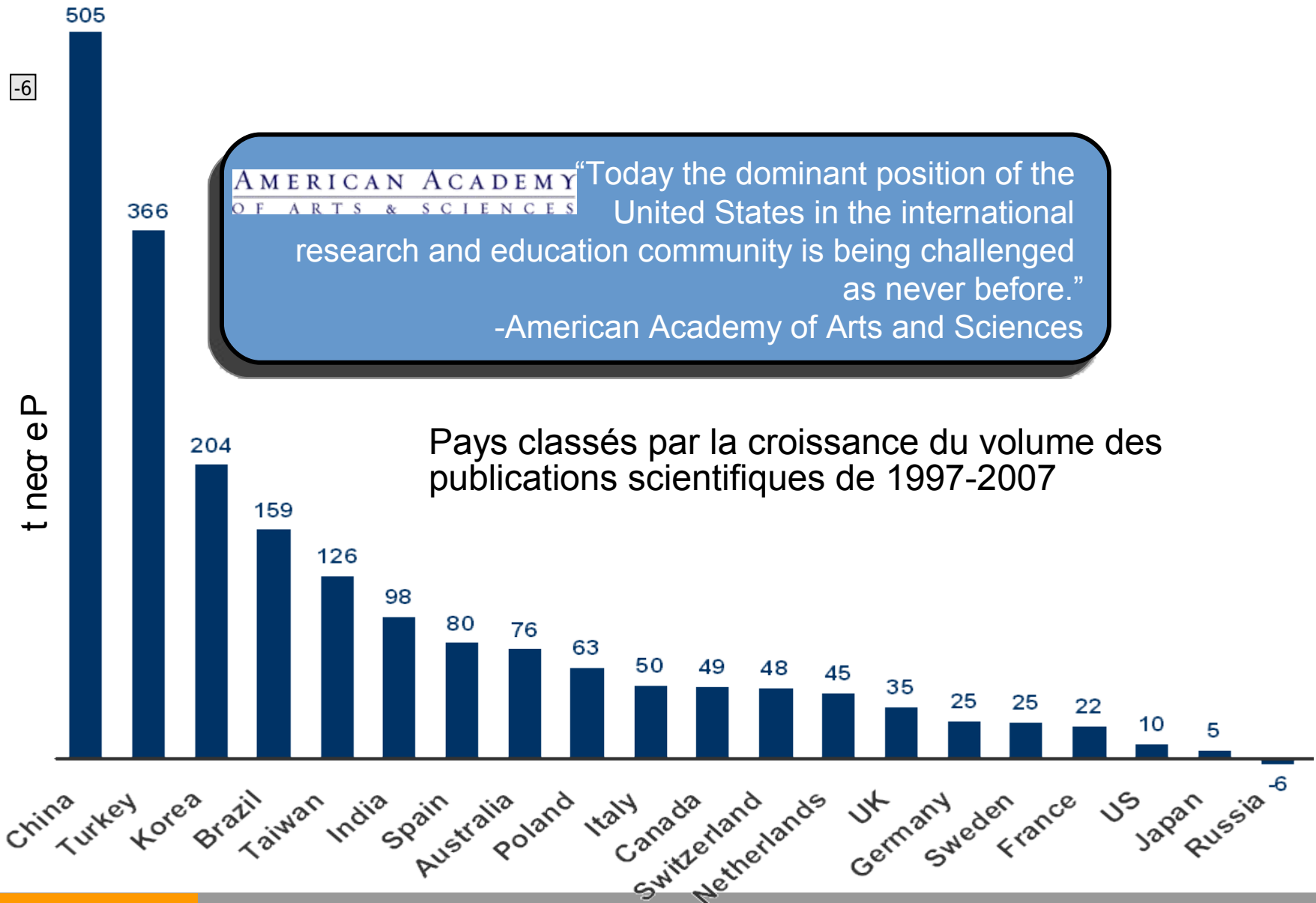
# LE CERCLE DE LA SCIENCE



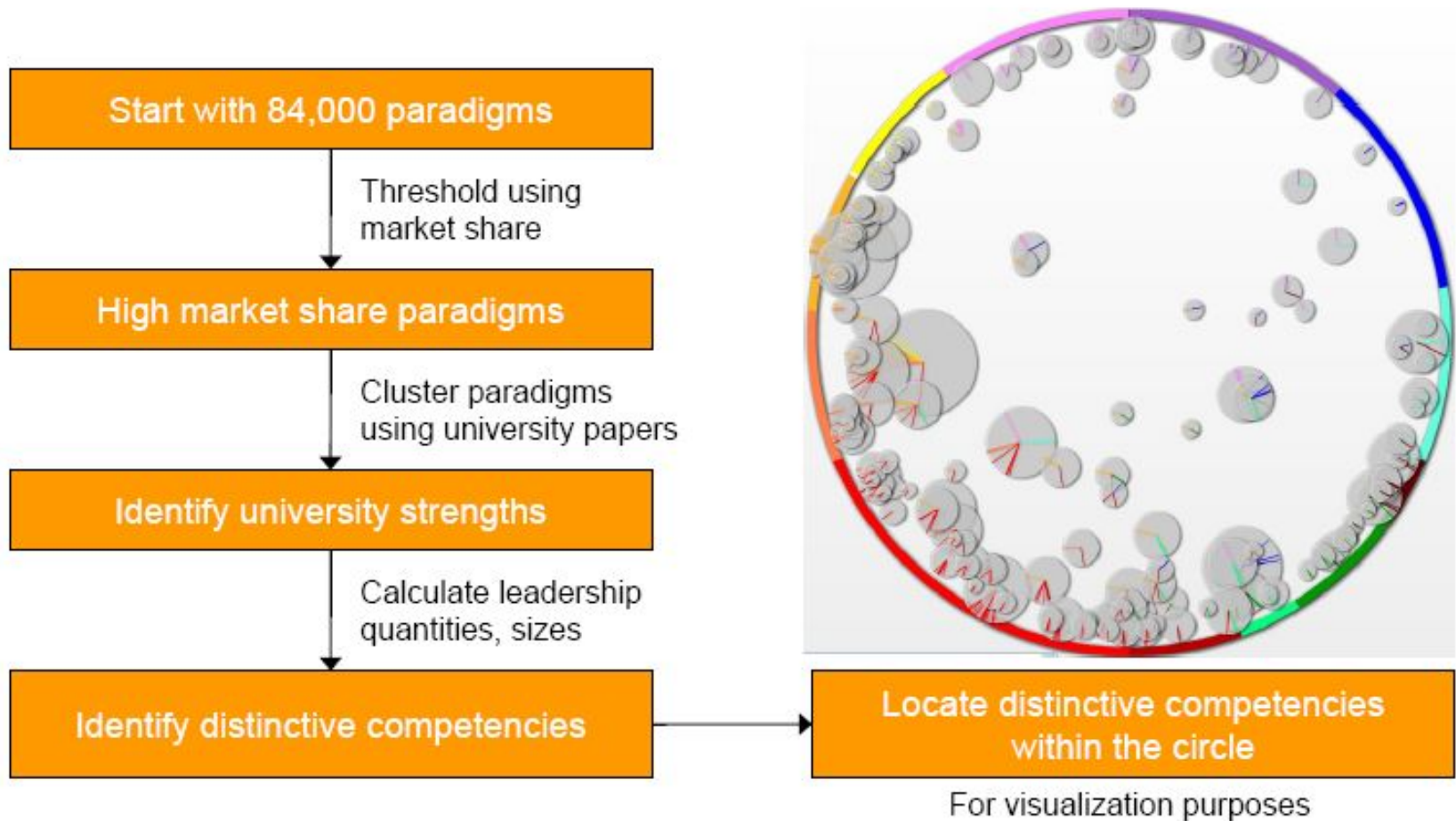
Spotlight est basé sur les travaux académiques de R.Klavans et K.Boyack



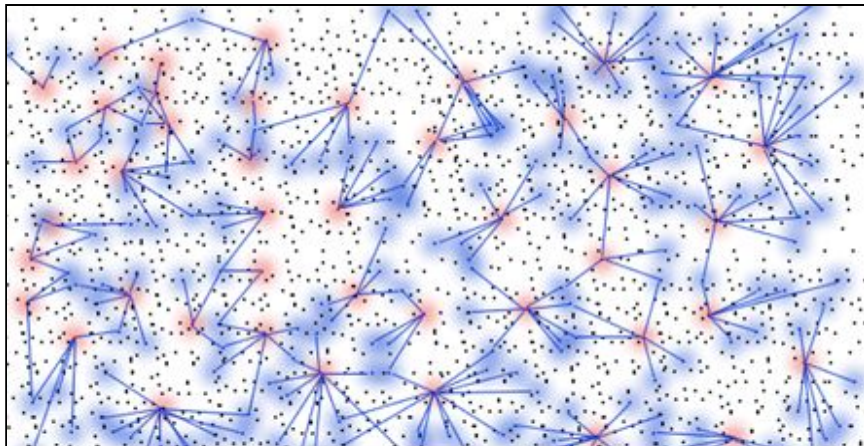
# L'émergence de nouveaux leaders



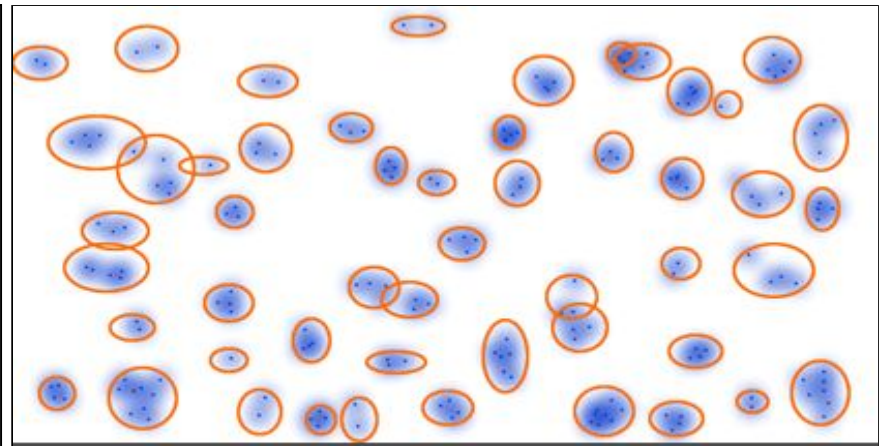
# VISUALISATION DU LEADERSHIP D'UNE INSTITUTION



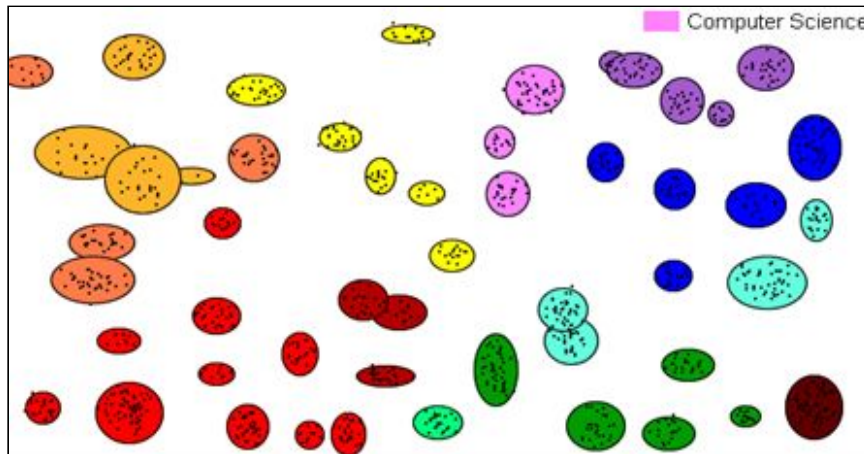
# VISUALISER LES CLUSTERS EXISTANTS ET EMERGENTS



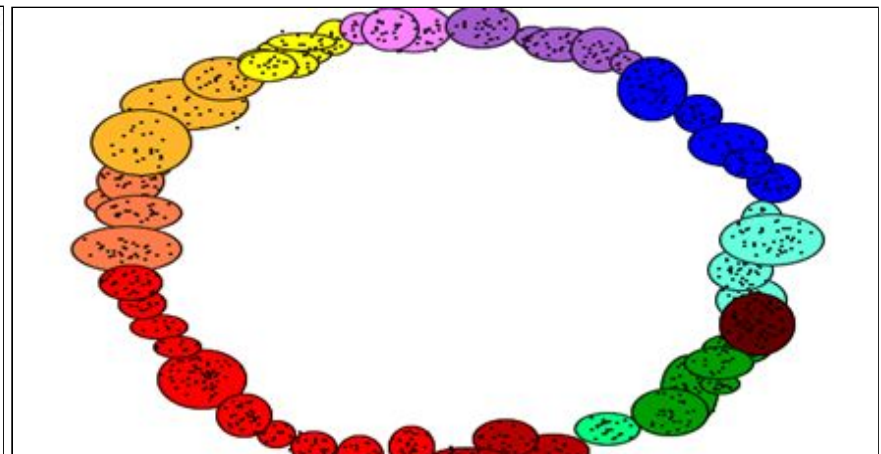
**Step 1** : Articles cited in 2007 are clustered using co-citation analysis



**Step 2**: Articles from past 5 years assigned to the clusters based on references



**Step 3** : Each cluster is assigned to a discipline and subject area



**Step 4** : All clusters are placed on the wheel for visualization purposes

# VUE DES DETAILS : visualisation d'une institution au sein d'une Compétence Distinctive

SciVal SPOTLIGHT

Home | Account | About SciVal Spotlight | Contact | Help

Select view: TABLE, MAP, MATRIX, **DETAILS**

Find

Competencies: 2 (DC), 3 (DC), **4 (DC)**, 5 (DC), 7 (DC), 9 (DC), 10 (DC), 11 (DC), 12 (DC), 13 (DC), 15 (DC), 16 (DC), 20 (DC), 22 (DC), 23 (DC), 24 (DC), 27 (DC), 29 (DC), 32 (DC), 33 (EC), 37 (EC), 40 (EC), 42 (EC), 44 (EC), 46 (EC)

### Distinctive Competency #4

Main keywords: amino acid; amino acids; fatty acid

Change region: Global

General | **Top Authors** | **Top Institutions** | Circle | Cluster Map

	Market Size (Global)	Institute	Relative Article Share	State	Reference Leadership
	3352.7	229.0	6.8%	5.36	1.0
Growth	10.65% ▲	4.11 ▲	-0.12% ▼	▲	

**Institute articles**

Fractionalized: 229.0 (3.8% of 6011 articles total for this institution past 5 years)

Articles: 391 [View 391 articles in Scopus](#)

Rank past 5 years: 1

Rank past 2 years: 1

Citation count: 1685.4

**Top authors Institute**

Name	Fractions
Author	57.6
Author	29.5
Author	28.2
Author	25.1
Author	17.5

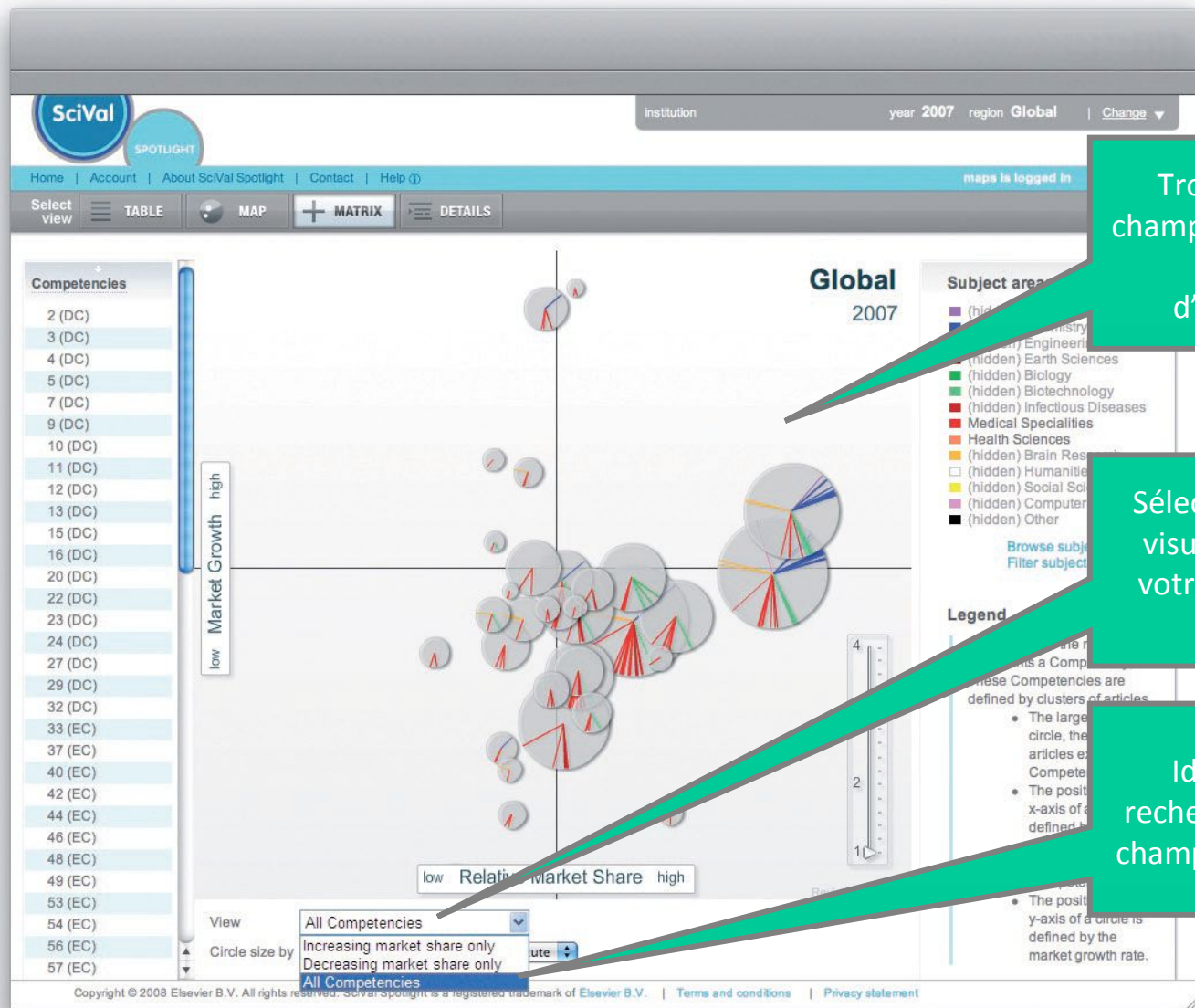
[Go to authors](#)

Visualiser les chercheurs à retenir / à recruter

Visualiser les institutions leaders 'Top Institutions' afin d'identifier les concurrents et potentiels collaborateurs



# VUE DE LA MATRICE : la performance des Compétences Distinctives versus les autres institutions



Trouver rapidement les champs de recherche émergents, pour votre politique d'investissements futurs

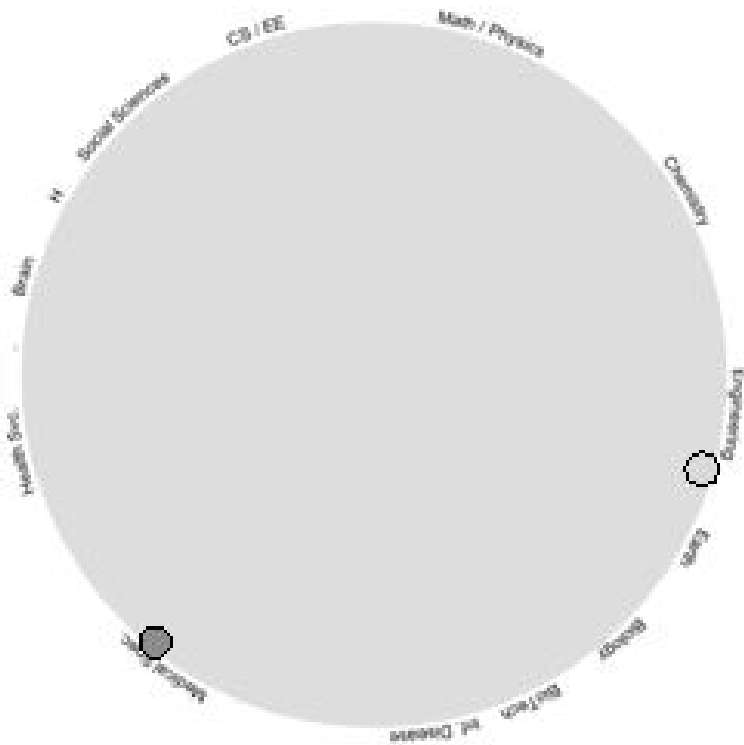
Sélectionner un critère afin de visualiser dans quels champs votre part de marché croît ou diminue

Identifier les forces de la recherche pour un leader d'un champ donné perdant du terrain

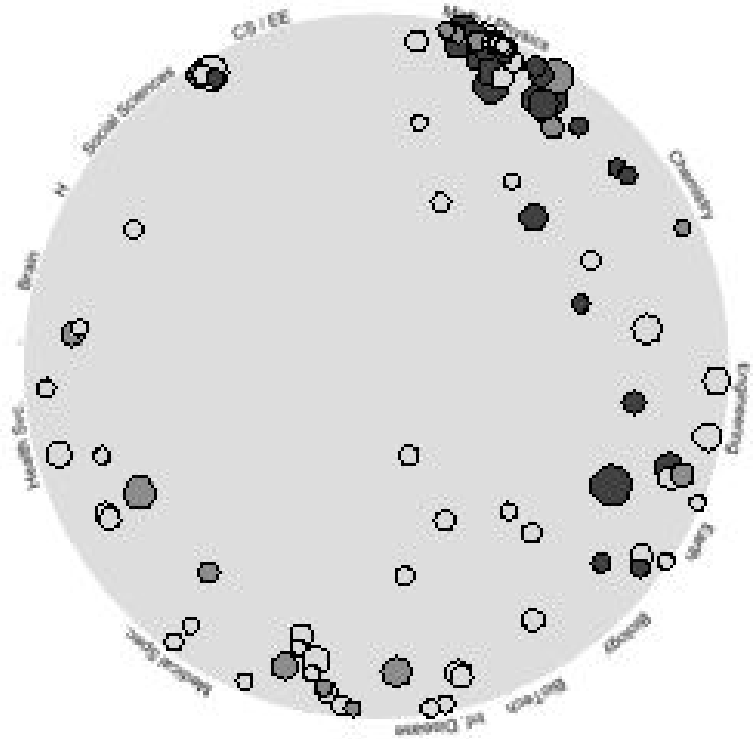
# Scival Spotlight permet une nouvelle vision globale

## Research Leadership in Germany

Traditional Method

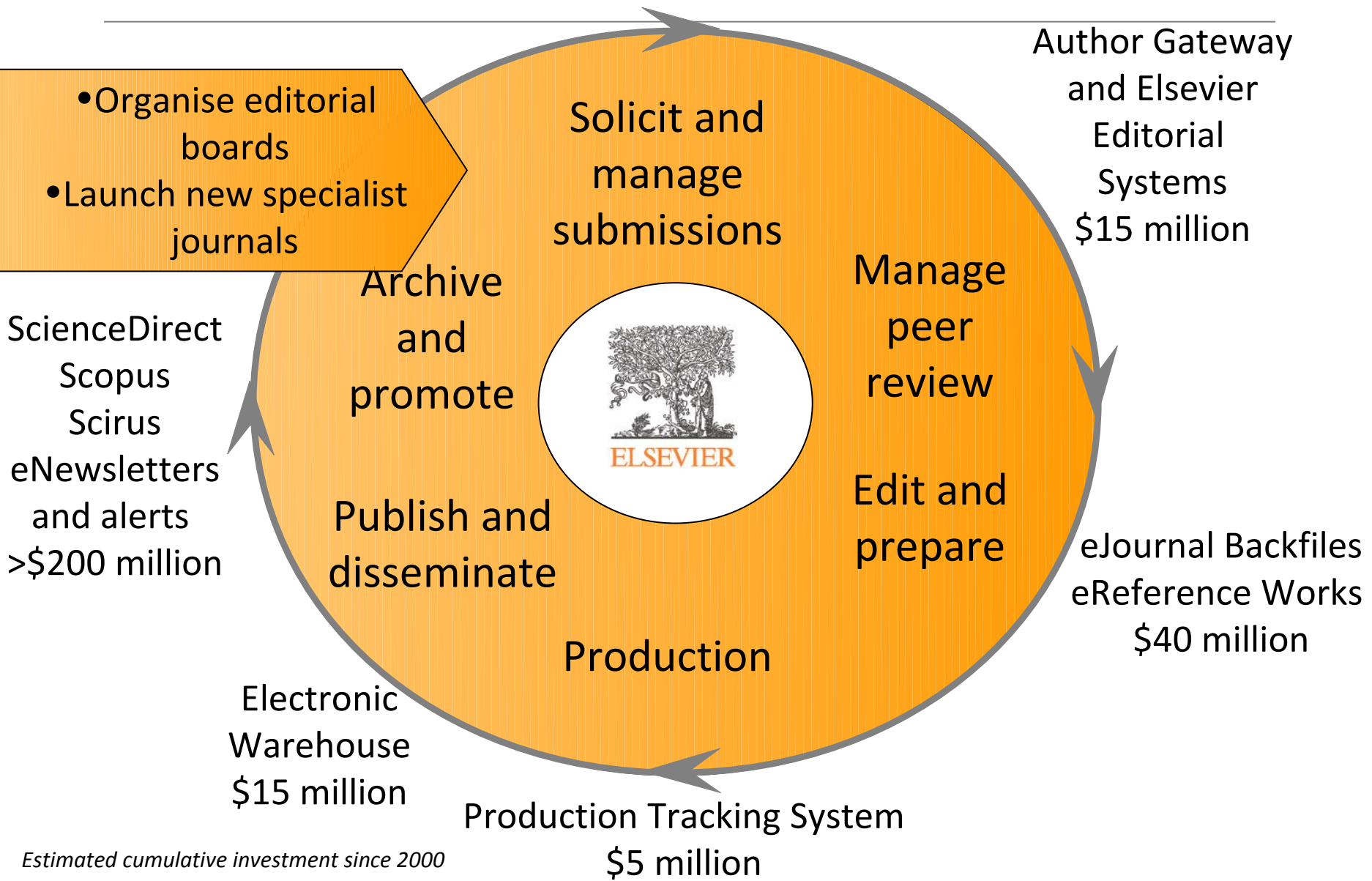


New Method



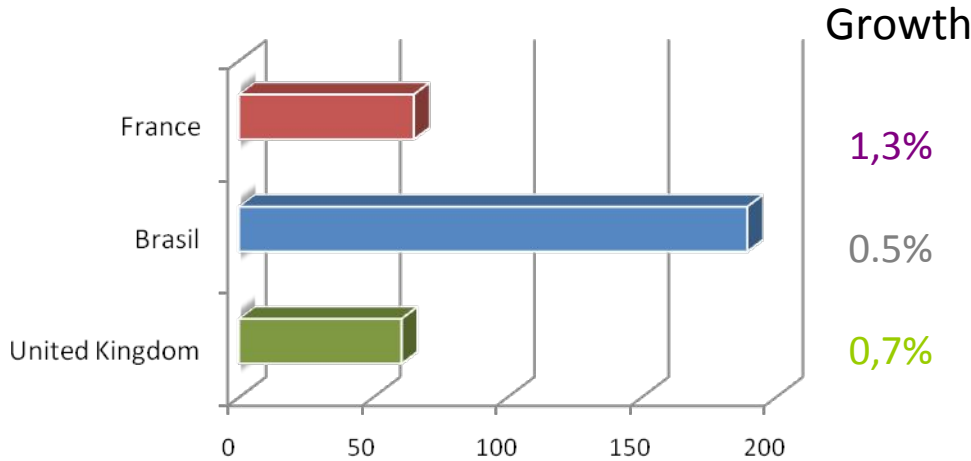
Source: Klavans, R. and Boyack, K.W. (2008) U.S. Vulnerabilities in Science & Engineering. Science & Technology Indicators Conference. Vienna.

# E-investments since 1999

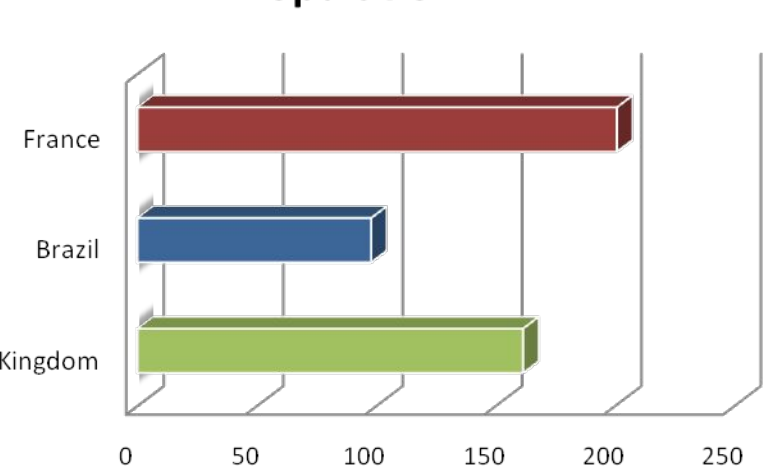


In percentages, Brazil's economic and populational growth is higher than that of the UK, however it is clear that R&D spend and the number of researchers do not follow that growth.

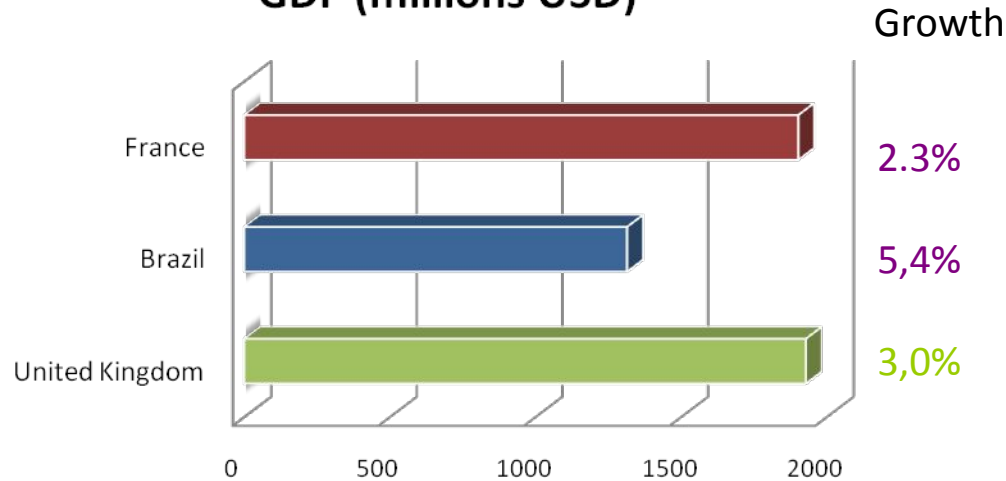
**Population in Millions**



**No. Of Researchers per Million of Population**



**GDP (millions USD)**



**Growth**

1,3%

0,5%

0,7%

**Growth**

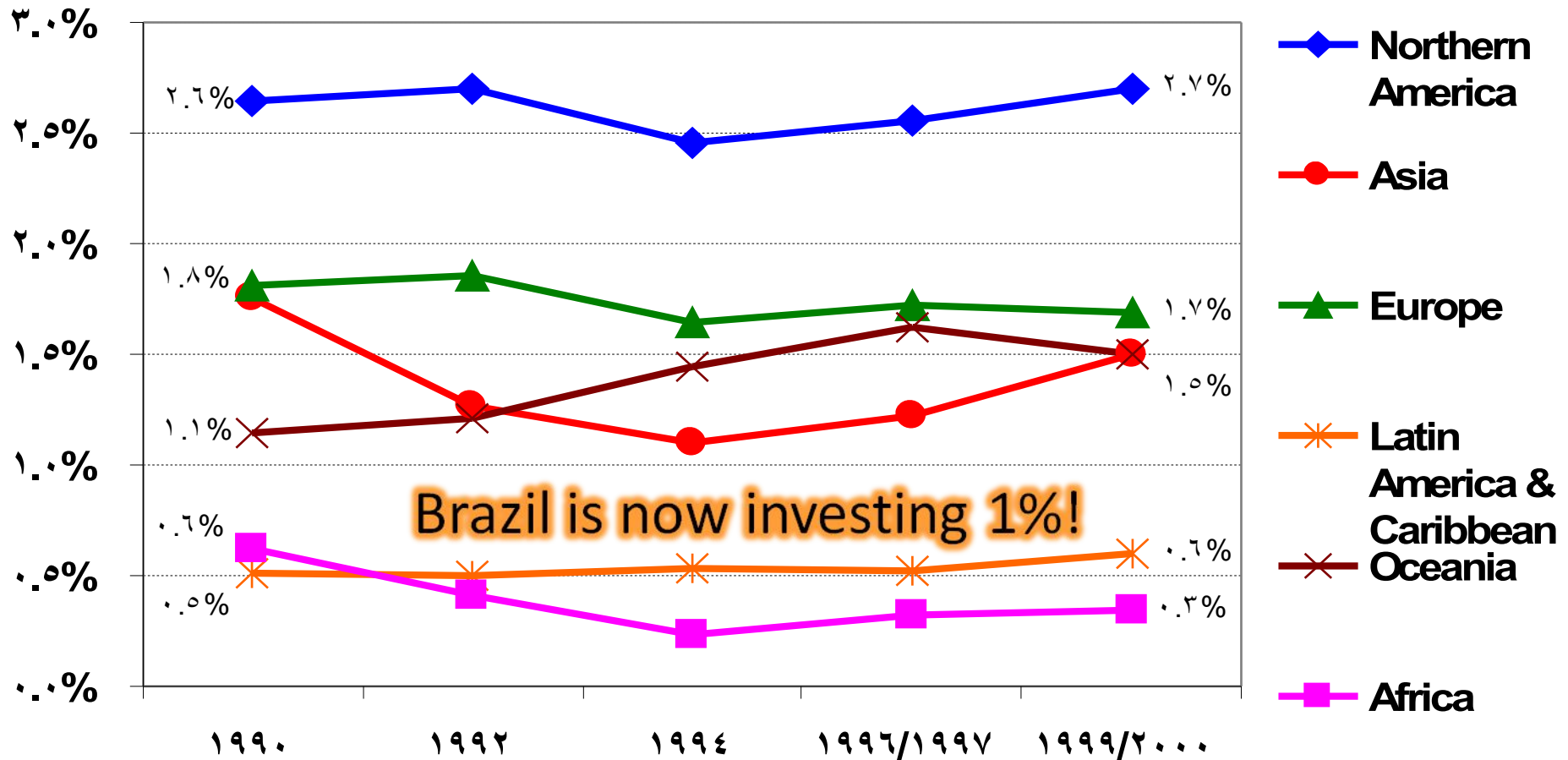
2,3%

5,4%

3,0%

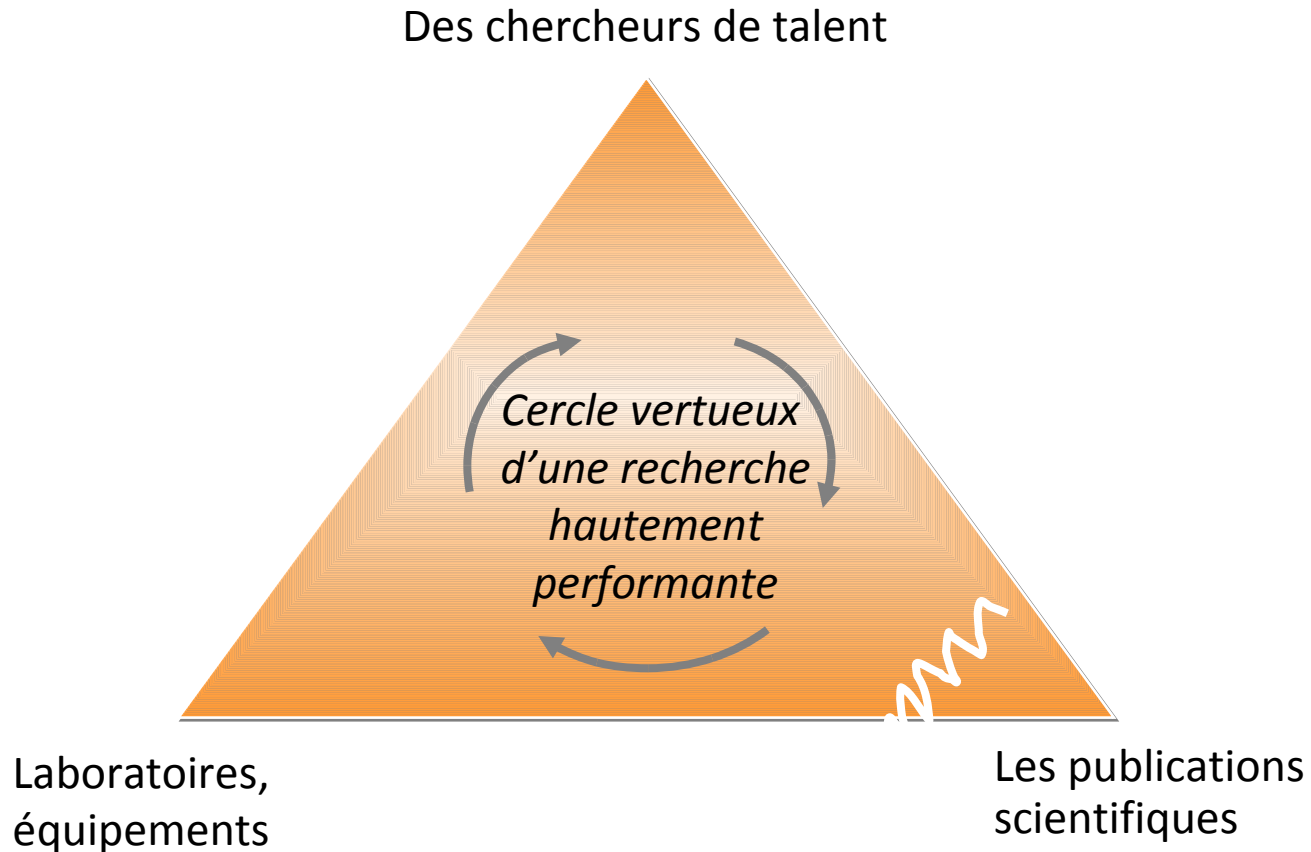


# GERD (R&D spend) as a percentage of GDP by region, 1990 - 2000



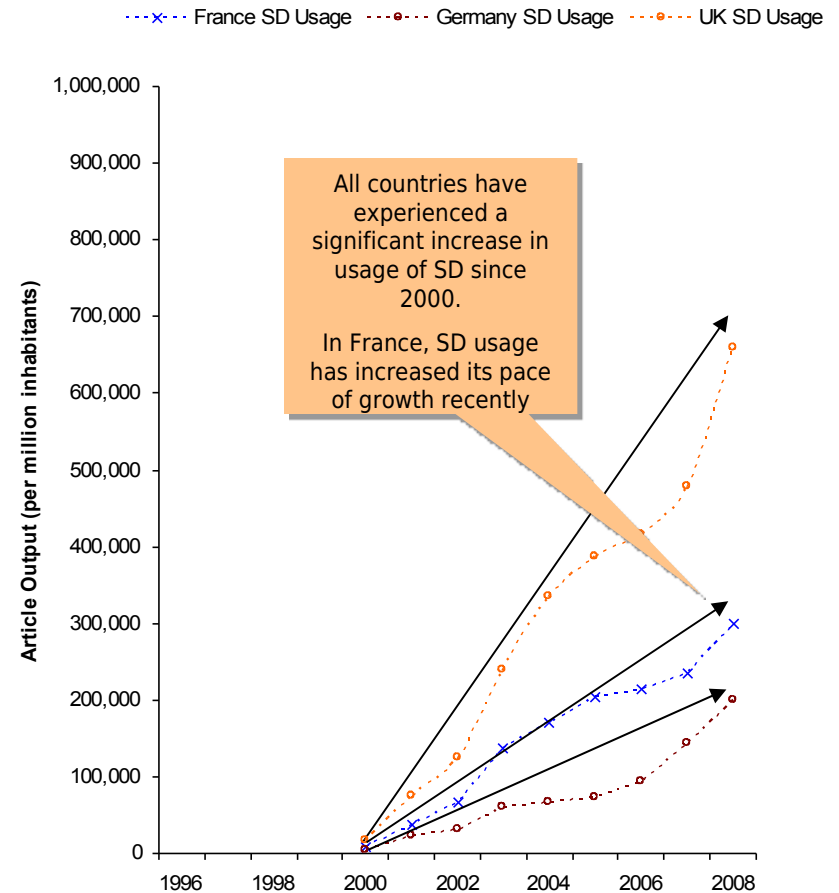
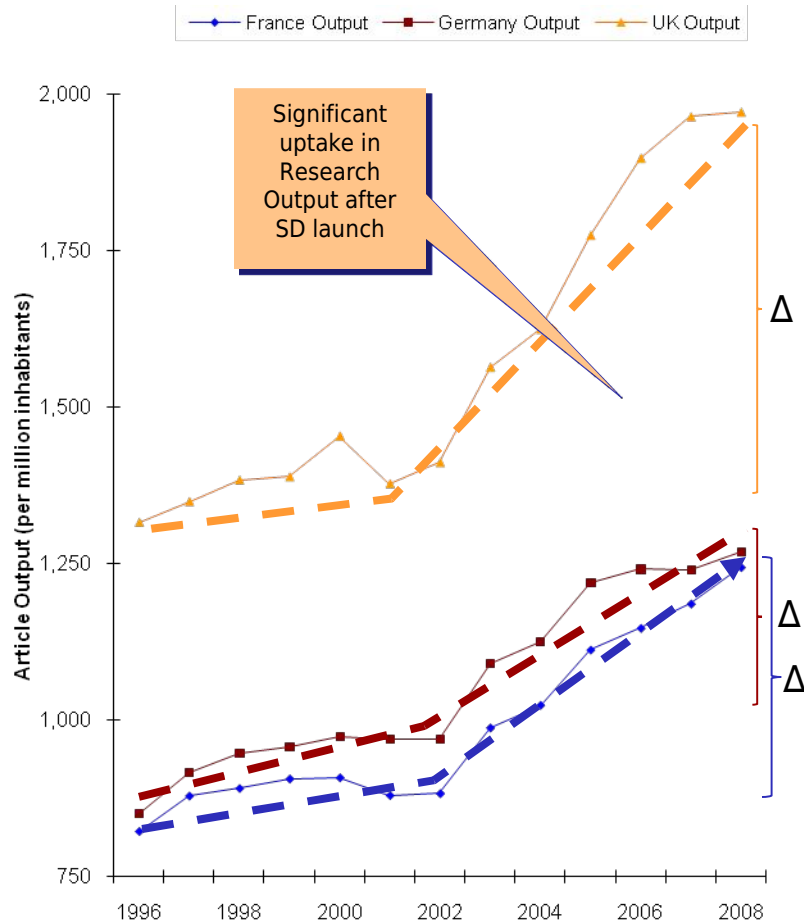
But this is still low when compared to Europe

# La contribution de l'accès aux publications scientifiques à la compétitivité de la recherche est souvent sous-évaluée



L'importance de la communication scientifique peut être démontrée tout comme la valeur ajoutée des ressources électroniques pour accroître la productivité d'une institution et sa capacité à obtenir des financements

# L'accroissement des volumes de publications suit l'accroissement de l'usage de ScienceDirect



Source: Science Direct



# Les chercheurs et les décideurs font face à de nouveaux enjeux

## Un environnement de la recherche

### changeant

- Le financement de la recherche est de plus en plus concurrentiel
- La recherche devient de plus en plus multidisciplinaire
- Les collaborations nationales et internationales prennent de plus en plus d'importance
- Nombre de gouvernements lancent des initiatives permettant de quantifier les publications scientifiques

Une recherche  
d'excellence  
des institutions  
françaises

## Les enjeux pour parvenir à vos objectifs

- Disposer d'une vue précise des forces et faiblesses des institutions
- Connaître les axes émergents de la recherche et des collaborations
- Être capable d'identifier, retenir et recruter les chercheurs d'excellence
- Identifier les sources et les opportunités de financement
- Obtenir un tableau de bord des volumes de publications des institutions, de leur performance et leurs domaines d'expertise

## Notre engagement

Notre nouveau programme Performance, Planning & Funding permet de disposer de solutions globales personnalisées afin d'aider les chercheurs et les dirigeants d'institutions à évaluer, construire et mettre en oeuvre leurs stratégies de recherche