圖書館創新服務再加值
Supporting The Research Lifecycle

-廣泛應用電子資源支援學術研究

Using new evaluation tools to promote the value of libraries for research and researchers

Presented by:

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Product Sales Manager, Elsevier Taiwan

Date: Nov 7th , 2012

Session Outline

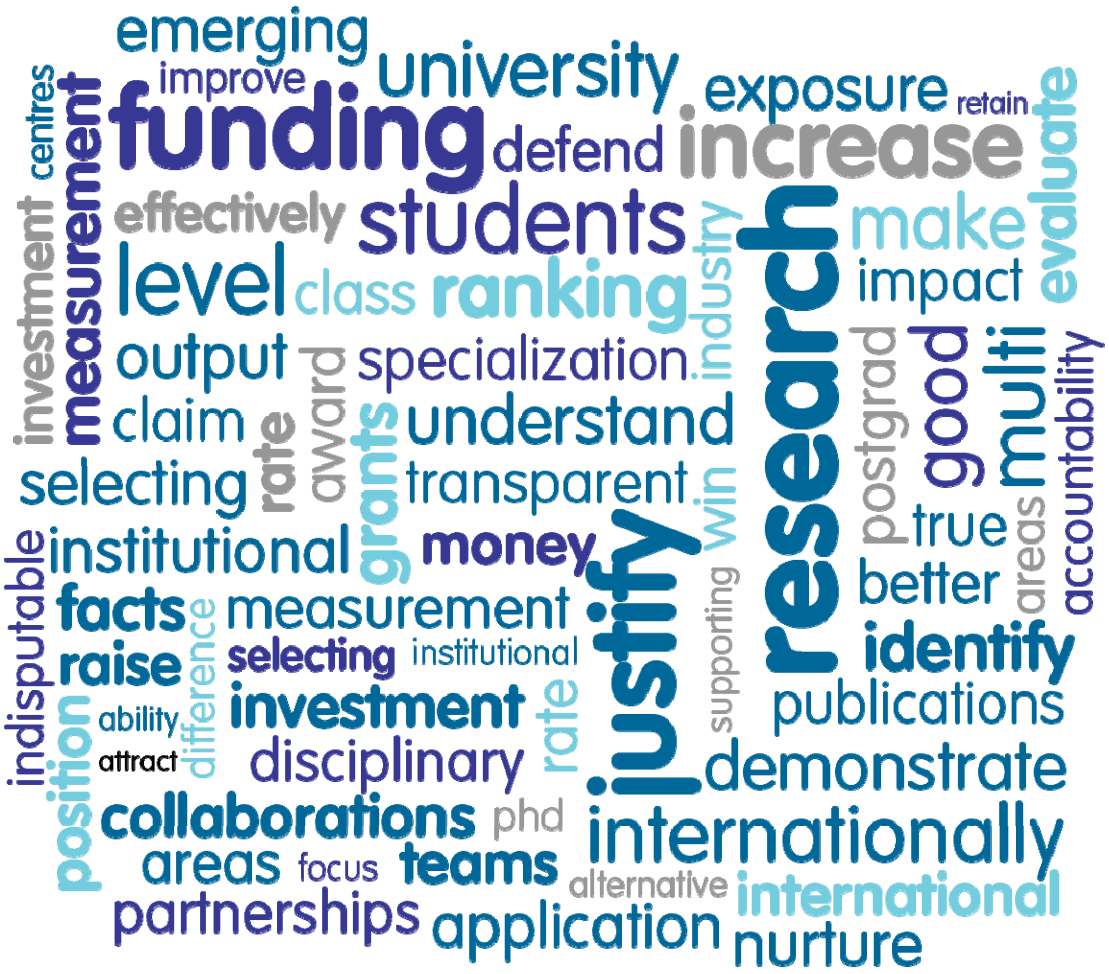
- Trends in Publishing
- Lean Research
- Be a Solution Provider

TRENDS IN PUBLISHING

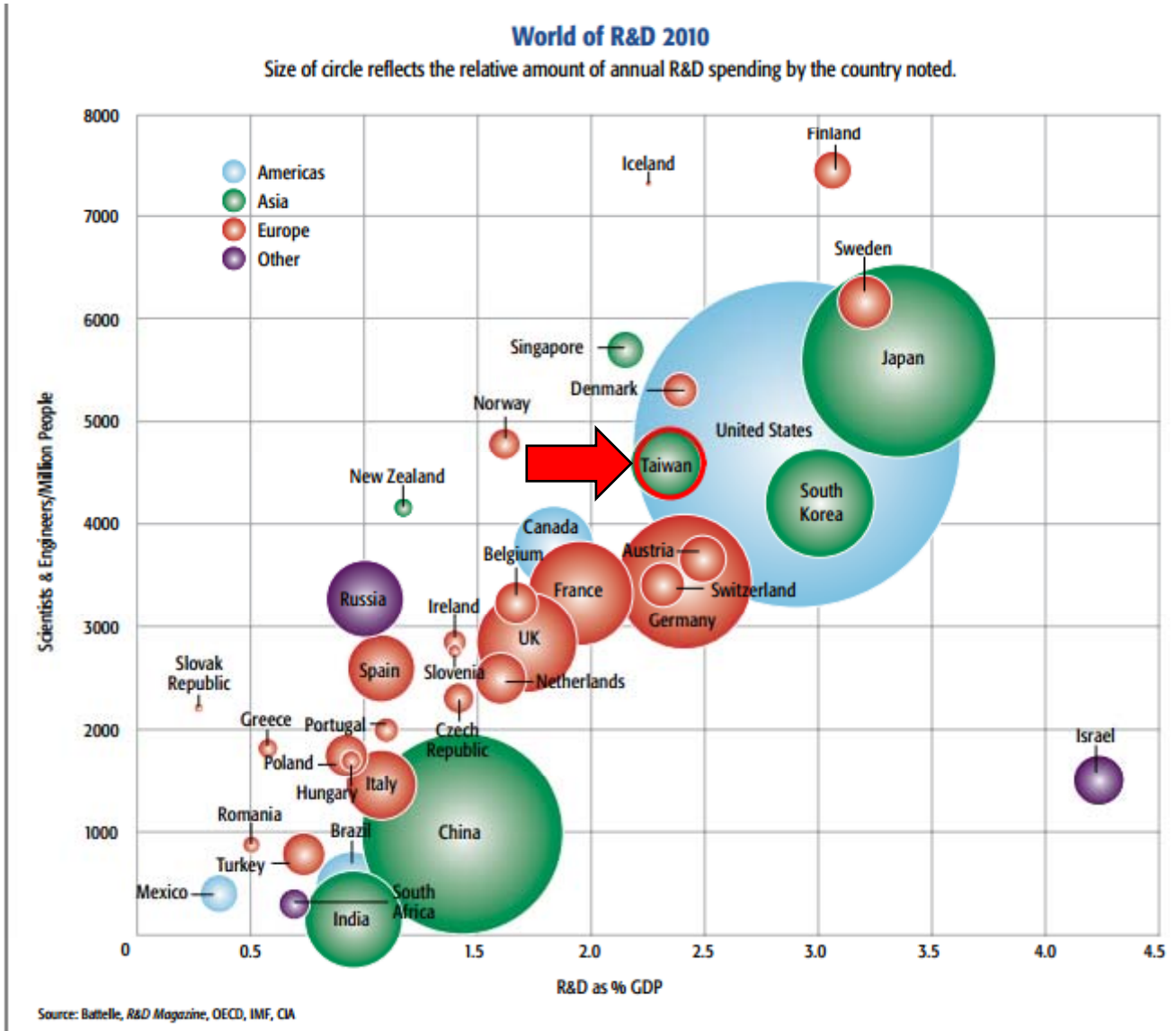
Global Trends that challenge Publishers

1. The Rapid Impact of Technology
2. The Rise of Specialized and Interdisciplinary Fields of Study
3. The Emerging Global Network of Scientific Research
4. Ensuring Global Access and Dissemination

What do you hear around the globe?

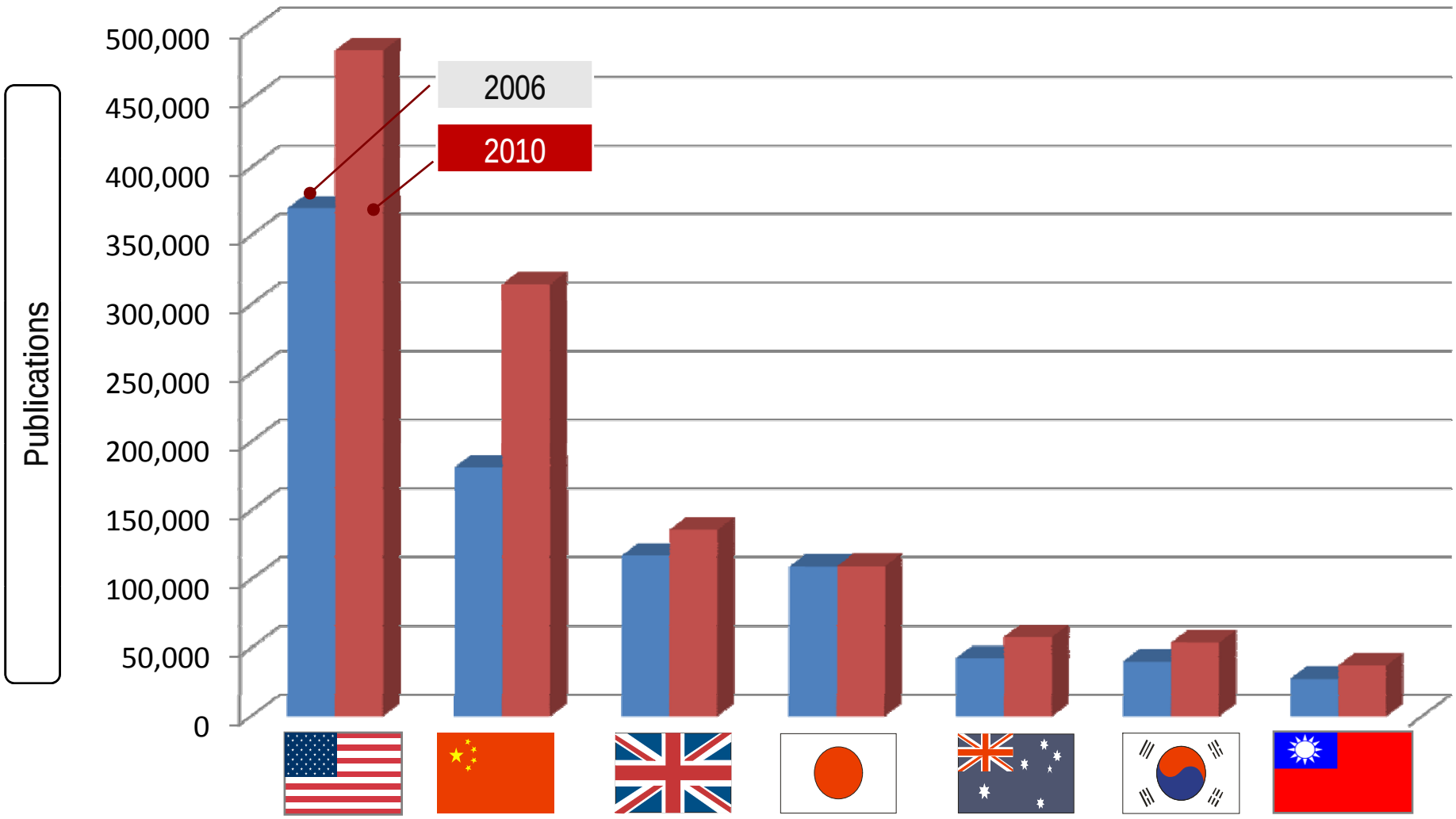


Taiwan: A Spot Not to be Missed



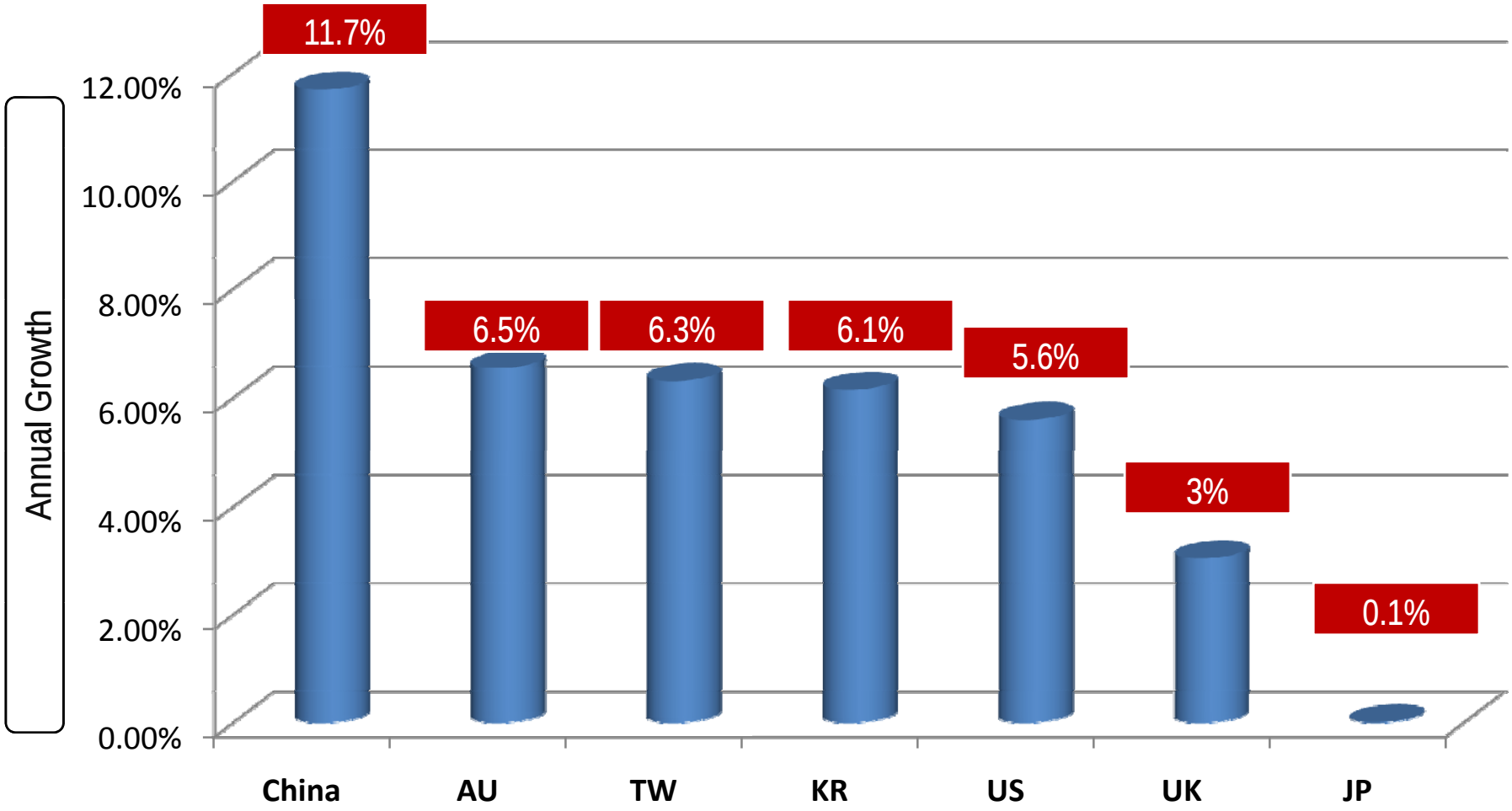
Source: 2011 Global R&D Funding Forecast, Battelle, www.battelle.org

Article Output of Key Countries
（2006-2010）



Source: SCIMAGO data (Using Scopus Data)

Article Output Growth of Key Countries （2006-2010）



Source: Scopus Data

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Lean Research

THE NEW REALITY…

LEAN TIMES = LEAN RESEARCH

"More data will be needed for evaluation/decision making locally to better manage in the economic climate and in response [to] assessment requirements at the national level."

– Association of Research Libraries
February, 2009

A RESEARCHER'S WORKFLOW

Tasks / Activities

- Search information/ new literature
- Sort and organize information
- Read information
- Evaluate research need and likelihood of funding

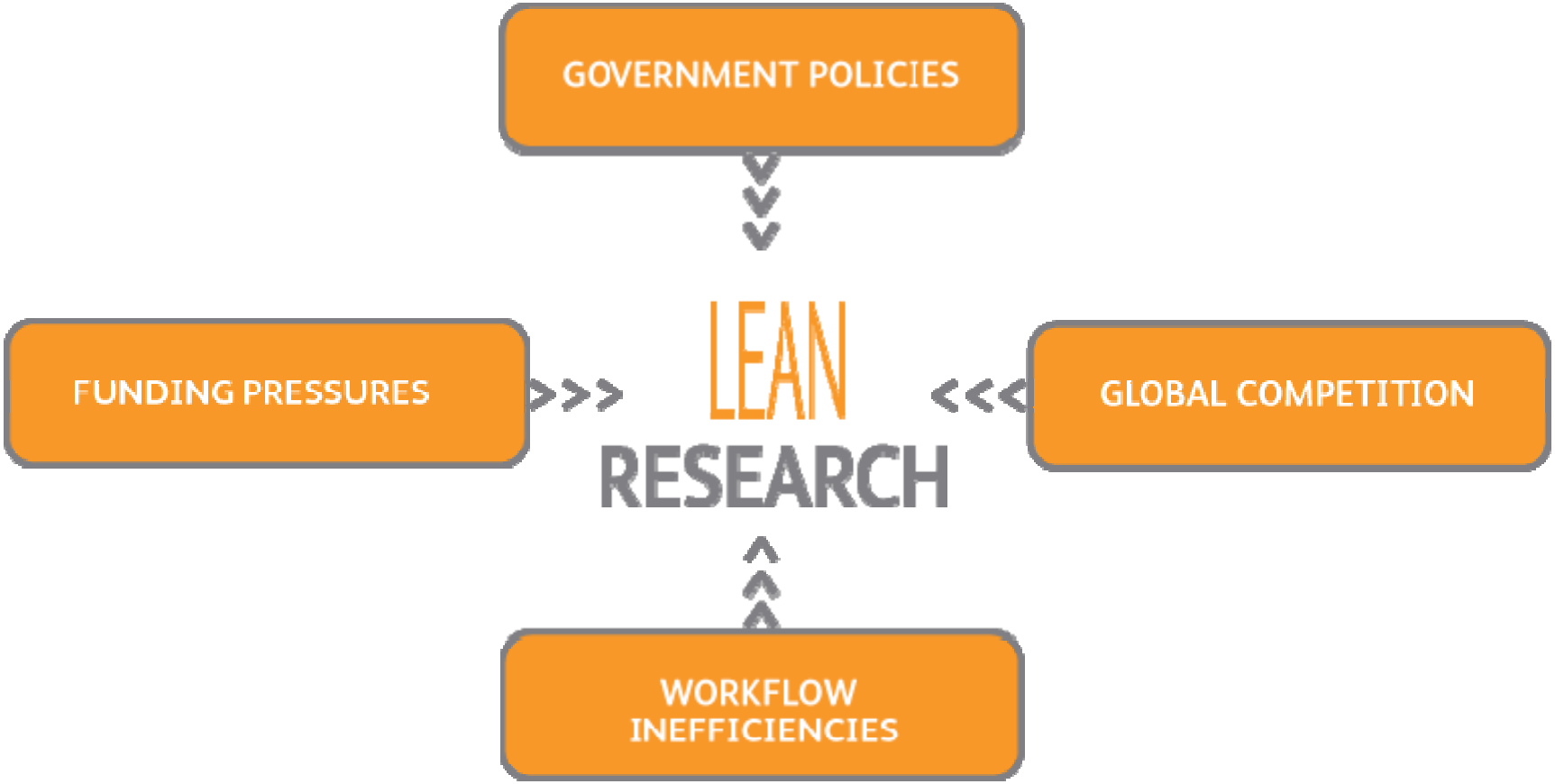
- Identify collaboration partners
- Identify relevant funding agencies
- Write proposals
- Submit proposals

- Plan research
- Conduct/ supervise experiments/ research
- Collaborate with partners
- Discuss/share/ check findings against literature

- Submit / track drafts
- Edit after review, resubmit
- Attend/organize conferences/ seminars

- Develop metrics
- Collect relevant data
- Measure performance

OTHER FORCES THAT SHAPE LEAN RESEARCH



Trend Exacerbated by Economic Downturn

"Performance levers" to influence research success

Human Capital

- Researchers
  - Domestic vs. international
- PhDs
  - Domestic vs. international

Funding

- National
  - Block grants
  - Project grants: Research Council, corporate and charity
- International , e.g. EU

- Skills development
  - PhD employment
- Strategic management
  - Portfolio analysis
  - Capitalisation on strengths
  - Emerging trends
- Collaboration
  - Internal
  - Domestic vs. international
- Capital, equipment, facilities
  - Space utilisation
  - Staff recruitment
  - Information resources
- Spending efficiency
  - Start/end date slippage

Academic

- Articles, citations
- Competencies

Esteem

- Awards, prizes, recognition

Commercial

- Patents, licences, spin-outs

Impact

- Social, economic, political, cultural

Be a Solution Provider
- Case Study

FUNDING PRESSURES

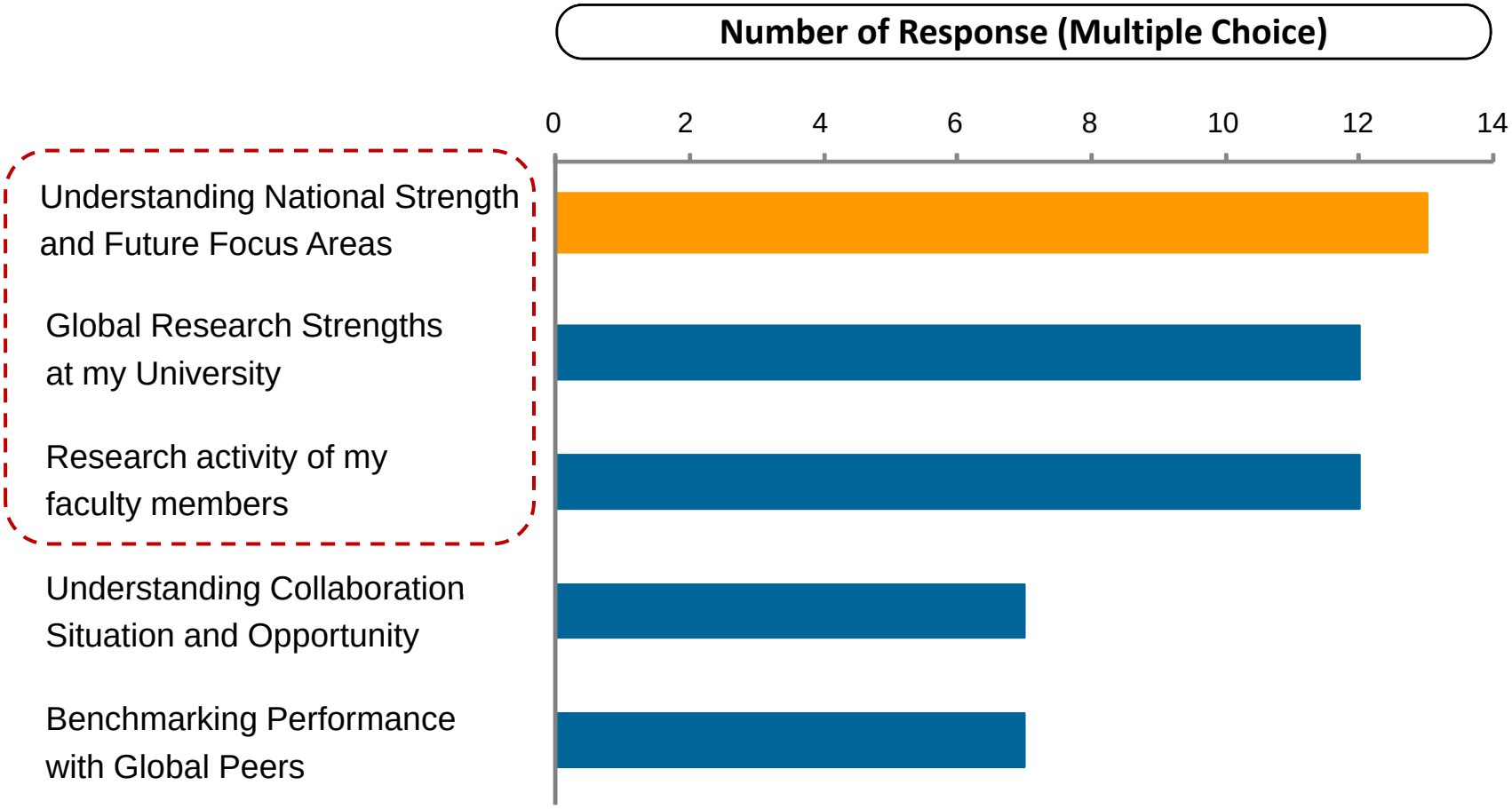
42 is the average age when biomedical researchers receive their first grant from the National Institute of Health

15% is the approval rate for National Science Foundation grant applications by new researchers

Competition for funding is intense and will continue to intensify

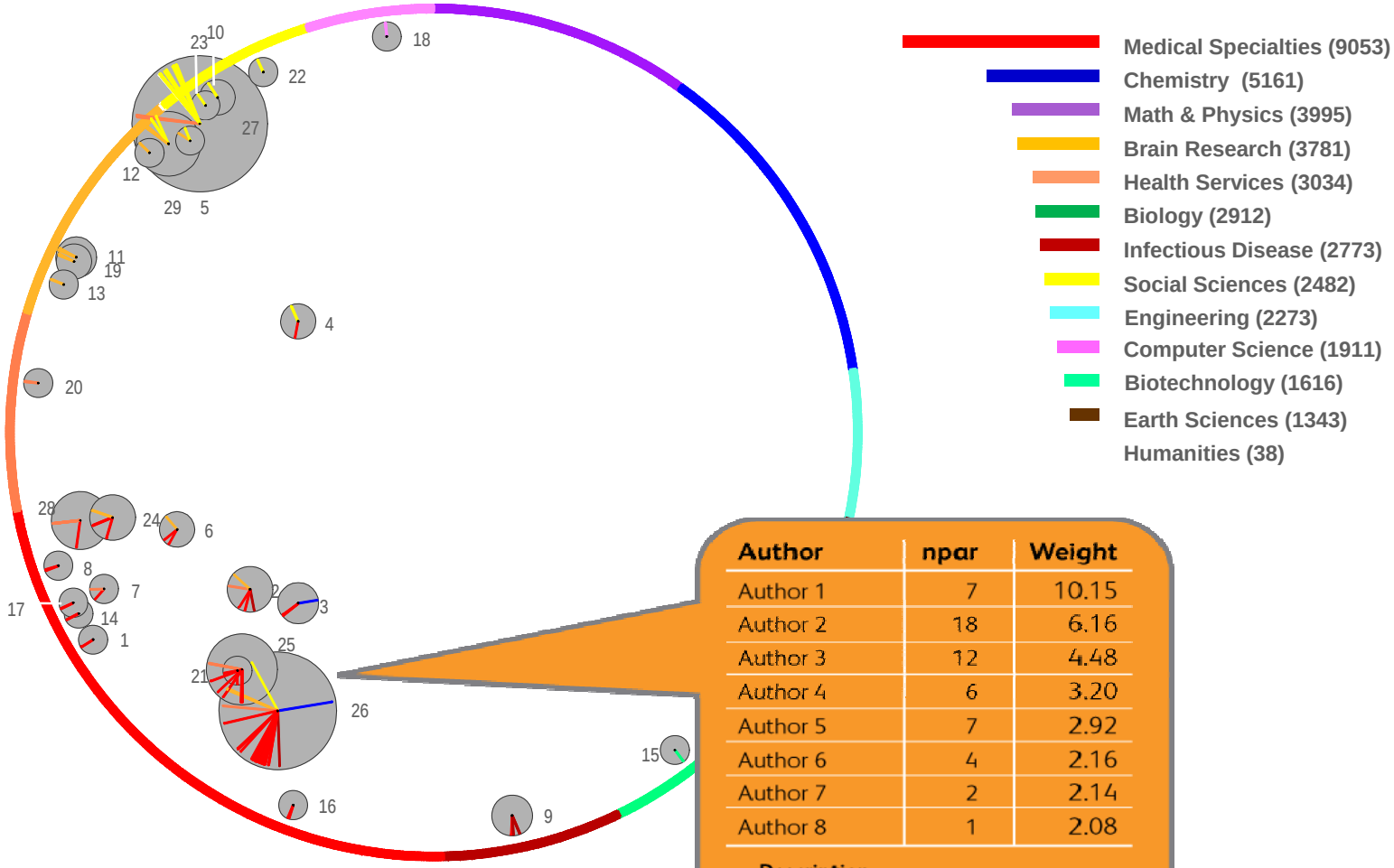
Source: American Academy of Arts and Sciences (www.scienceprogress.org)

Survey Result:
What kind of information are you looking for?



Survey (n=20), Respondents: Presidents or Vice Presidents from Japanese universities, Conducted Feb 24-March 10, 2011
Source: Survey

A UNIVERSITY'S "DISTINCTIVE COMPETENCIES"



Author	npar	Weight
Author 1	7	10.15
Author 2	18	6.16
Author 3	12	4.48
Author 4	6	3.20
Author 5	7	2.92
Author 6	4	2.16
Author 7	2	2.14
Author 8	1	2.08

Description

- Clinical cancer research
- Molecular endocrinology
- Molecular neuroscience

Making investment choices
A case study: A Japanese University

- **The University management team decided to create a special funding budget to allocate to selected research groups**
- **The challenge – objectively distribute funds to stimulate research activity**

University used data from multi sources as one metric to make the peer-review process effective

'Quantitative Analysis'

Searched each applicant's name in various databases to objectively understand performance

- SciVerse Scopus
- SciVal Spotlight
  - Number of competencies etc.
- Other databases…

+

'Qualitative Analysis'

Peer-review process among top researchers from each research department

- Potential of research topic
- Consistency with university's overall strategy
- Other criteria…

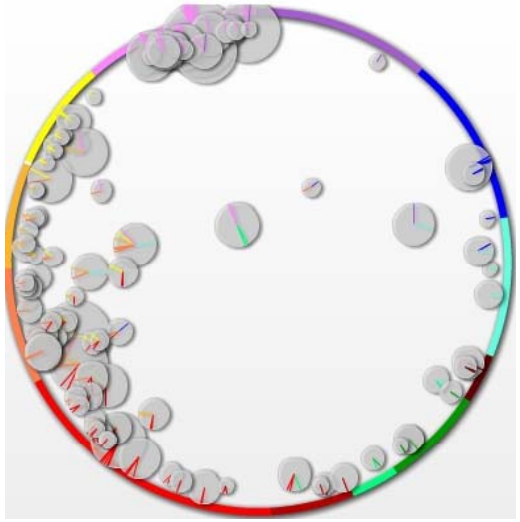
Result: Successfully narrowed down 48 applicants to 8 projects that would receive funding

Source: Interview

Shed light on research strengths

Identify and analyze interdisciplinary areas of research excellence

- **Identify multidisciplinary strengths at an institutional and national level**
- **Identify top researchers for retention or recruitment decisions**
- **View institutions that share similar strengths for potential collaboration**

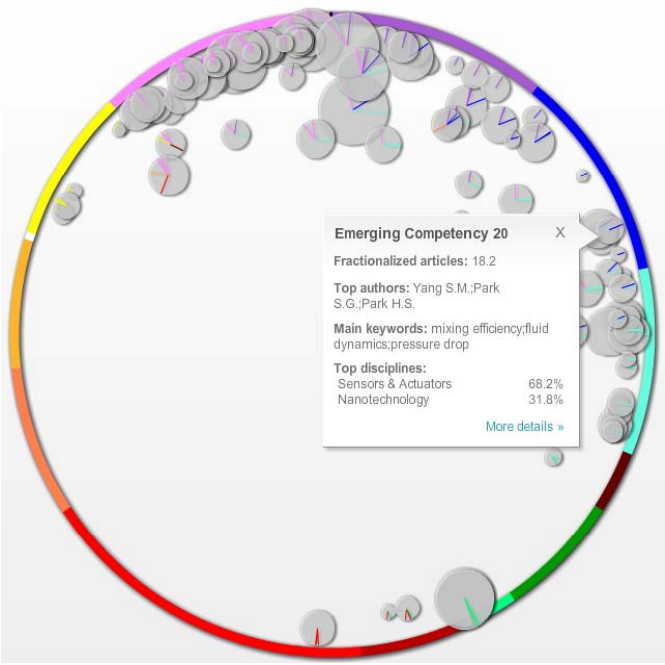


Authors at Athena University

Top 100 authors by number of published articles (2004-2008)

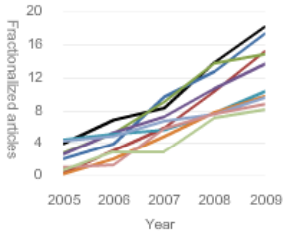
Author	Published articles	Articles in competencies	Competencies
1. Stickley T.	196	115	3
2. Repper J.M.	167	50	2
3. Ferguson E.M.P.	141	84	4
4. Schneider J.M.	138	76	4
5. Timmons S.A.	122	45	3
6. Cox T.	104	91	3
7. Kai J.	95	64	3
8. Stevenson N.	81	22	1

Identify global institutions actively conducting research in your strength areas



View top institutions:

- All institutions
- Only collaborating institutions

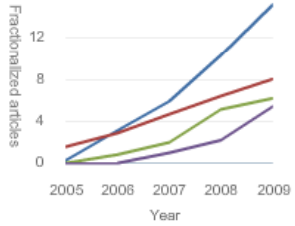


All institutions

	Institution	Fractionalized articles	Total articles	RRS	SotA	Citation count
1.	Korea Advanced Institute of Scie...	18.2	24	0.14	0.85	72.1
2.	University of Illinois at Urbana...	17.4	37	0.62	0.62	137.1
3.	University of Pennsylvania	15.2	27	1.60	0.58	101.3
4.	National Cheng Kung University	14.9	29	0.04	0.29	57.3
5.	Massachusetts Institute of Techn...	13.7	34	0.61	0.79	137.0
6.	Nanyang Technological University	10.4	20	0.11	0.55	241.8
7.	University of Toronto	9.8	23	0.33	1.65	82.7
8.	Eindhoven University of Technology	9.6	21	0.09	0.32	192.2
9.	University of Washington	8.8	20	0.29	0.81	12.8
10.	National Tsing Hua University	8.2	13	0.00	0.32	25.9

View top institutions:

- All institutions
- Only collaborating institutions



Only Collaborating institutions

	Institution	Fractionalized articles	Total articles	RRS	SotA	Citation count
1.	University of Pennsylvania	15.2	27	1.60	0.58	101.3
2.	Pohang University of Science and...	8.0	14	0.02	-1.09	44.3
3.	Georgia Institute of Technology	6.2	16	0.34	1.24	35.4
4.	Sogang University	5.4	10	0.00	1.20	3.6

Download CSV | Print preview

Source: SciVal Spotlight 2009 (May 2011), Analysis

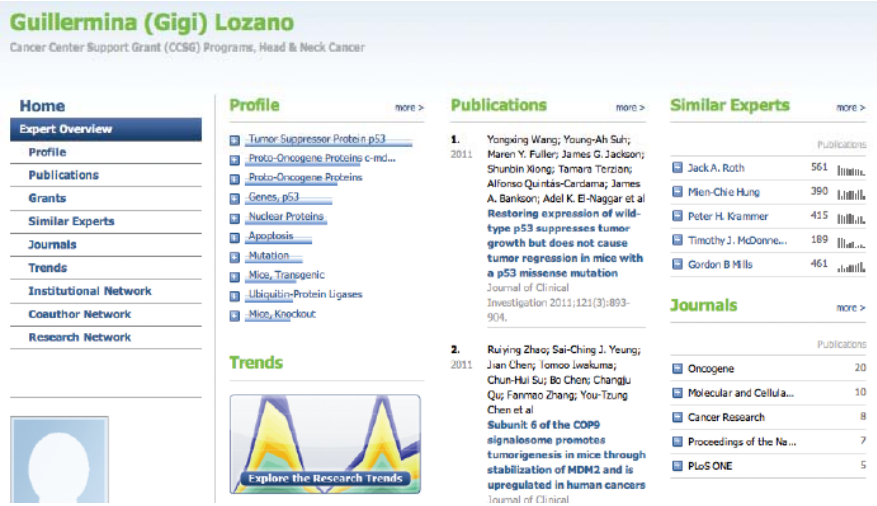
Building a global network to fight cancer
A case study: An US institution

- The VP of Global Academic Programs at The University wanted to create a network among researchers and its 23 sister institutions around the world to help achieve its mission "Making Cancer History"
- The challenge – enabling researchers and administrators to easily identify experts across institutions and facilitate opportunities to collaborate

to help researchers make valuable connections

Understanding the research activities of faculty members

Identifying the right collaborators for grant proposals



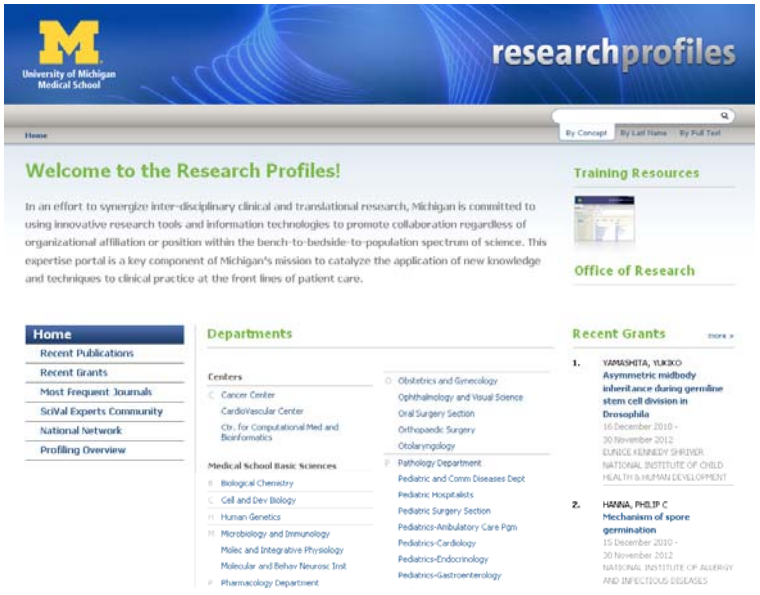
Each profile includes lists of publications, awarded grants & co-authors, et al.

Find potential collaborators by accessing a list of faculty conducting similar research

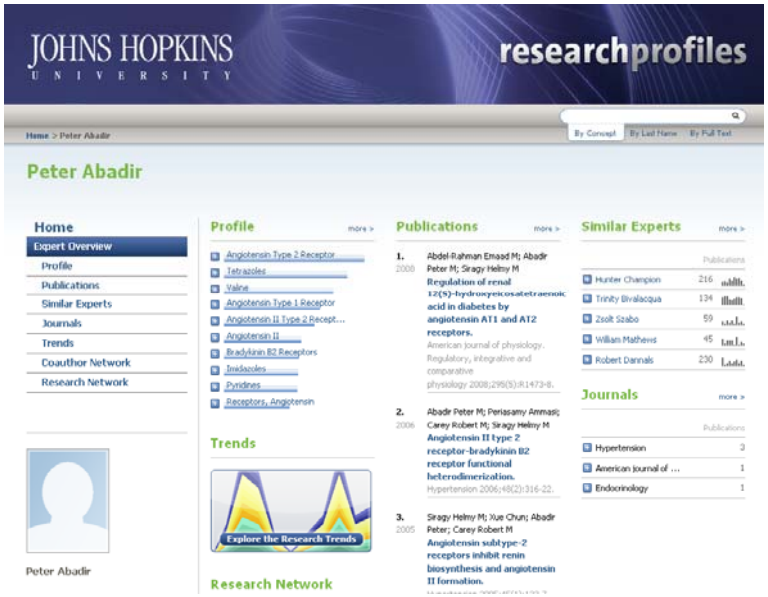
"Elsevier has made it easier to find the right expert at our institution, and so has lowered the barrier for potential collaborators to make a good connection."

Source: Vice President of Global Academic Programs, The University of Texas MD Anderson Cancer Center

How can we assemble research teams?



www.experts.scival.com/Umichigan



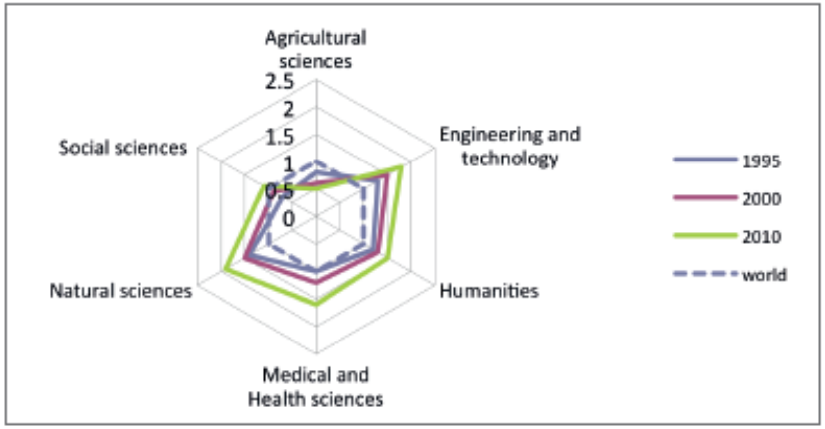
www.experts.scival.com/JHU

Form effective research teams within your institution and across organizations. Access accurate, comprehensive author profiles of your researchers, including publication lists, without burdening authors to input data. Grant, patent and CV data can also be integrated to provide a more comprehensive picture of your institution's research expertise.

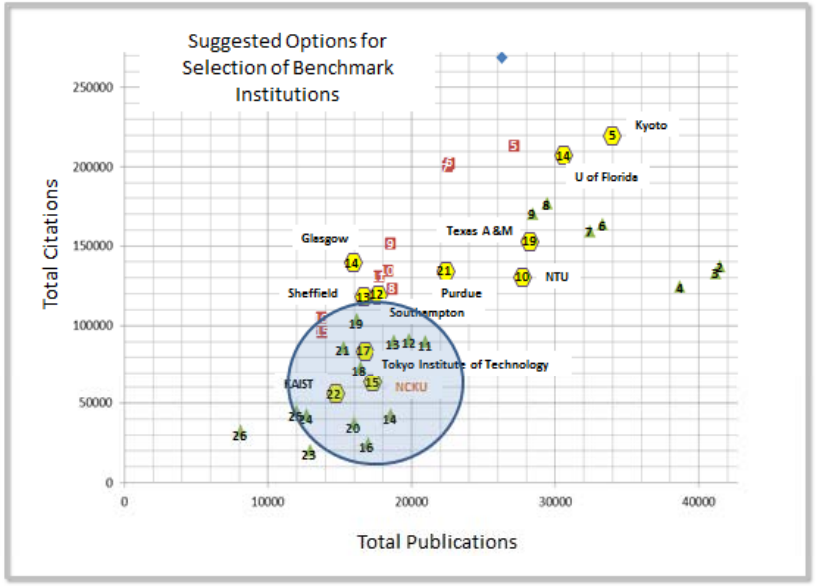
Note: SciVal Experts is customized for the institution. Sample screens from other organizations provided.
Source: SciVal Experts (April 2011), University of Michigan, Johns Hopkins University

Analytical Report – further information

Research Radar



Benchmarking Radar



SUMMARY

- Economic downturn has intensified focus on research effectiveness and efficiency, bringing a new reality for us all…
- Efficiency and effectiveness can only be realized by taking a deeper look at the research activity workflows and identifying improvement opportunities
- Lean research presents an opportunity for the **LIBRARIANS** to play an enhanced role in the research process
- **YOU** can dramatically transform the role in line with this new reality and support institutions in becoming lean research organizations

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Thank You For Listening