

Данные и метрики в Dimensions

СМЕНА ПАРАДИГМЫ

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Digital Science

Генезис Dimensions



Данные и возможности Digital Science для Dimensions

GRID

Institution disambiguation,
80k+ organisation IDs,
openly available



3.7 M projects in grant
database, enrichment
services and analytical
application core



Altmetric

Tracking attention in
news, social media
and policy papers - as
an immediate
resonance



Global patent
database - more
than 100M patent
records

 **SYMPLECTIC**

Research information
management system -
deep knowledge
about institutional
requirements for
data and metrics



figshare

Allowing researchers
and institutions to
store, manage and
publish research
related data



readcube

Serving
publishers, access
to +50M journal
articles and books

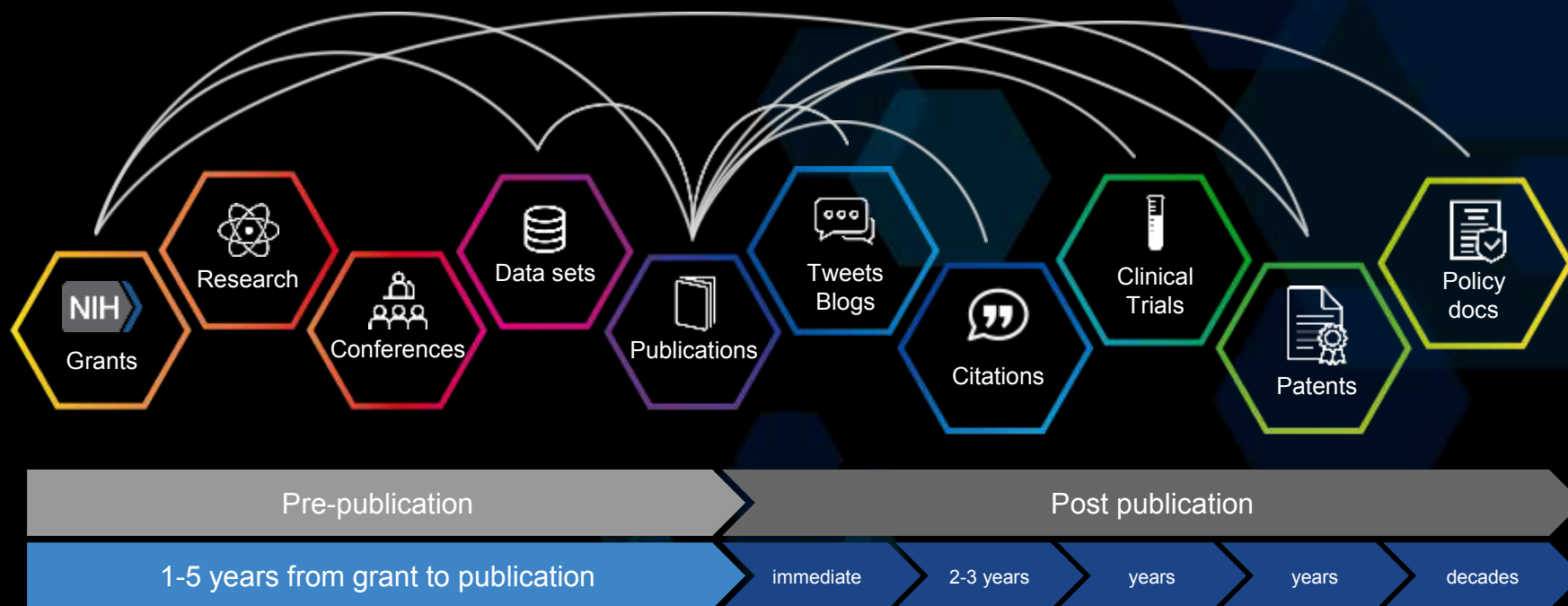
100+ партнеров и их вклад в создание и улучшение Dimensions (~10% партнеров -- Россия)

Обратная связь

- Формулирование потребностей и use case во всех областях – исследования, администрация, управление информацией
- Потребности внутри отдельных дисциплин и предметных областей
- Региональные и страновые отличия и нюансы
- Лучшие практики
- Постоянный процесс (до и после запуска Dimensions)

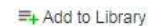


Общее понимание – смотрим настоящую «big picture»



HEALTH RESEARCH AREAS	
BROAD RESEARCH AREAS	
PUBLICATION TYPE	
Article	443,982
Chapter	55,400
Proceeding	25,999
Preprint	107
Monograph	36
SOURCE TITLE	
Carbon	8,998
RSC Advances	7,944
Electrochimica Acta	7,641
Applied Surface Science	6,347
Sensors and Actuators B Chemical	5,905
Nanotechnology	5,185
Scientific Reports	4,691
Advanced Materials	4,389
International Journal of Hydrogen	4,245
Journal of Materials Chemistry A	4,125
More	
JOURNAL LIST	

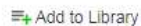
2005, The Journal of Chemical Physics - Article

 22  Open Access  Add to Library

Analysis of stability of nanotube dispersions using surface tension isotherms.

Vijaya Sa, Konstantin G Kornev

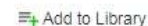
2011, Langmuir - Article

 24  Add to Library

Enhanced field emission from multiwall carbon nanotube films by secondary growth.

Christian Klinke, Erik Delvigne, Johannes V Barth, Klaus Kern

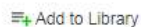
2005, The Journal of Physical Chemistry B - Article

 25  Open Access  Add to Library

Single-walled MoTe(2) nanotubes.

Xiaojun Wu, Zhanping Xu, X C Zeng

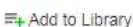
2007, Nano Letters - Article

 19  Add to Library

Functionalized carbon nanotubes: properties and applications.

Ya-Ping Sun, Kefu Fu, Yi Lin, Weijie Huang

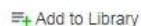
2002, Accounts of Chemical Research - Article

 1k  3  Add to Library

Formation of CeO₂ nanotubes from Ce(OH)CO₃ nanorods through Kirkendall diffusion.

Guozhu Chen, Sixiu Sun, Xun Sun, Weiliu Fan, Ting You

2009, Inorganic Chemistry - Article

 43  Add to Library

Orthogonal orientation control of carbon nanotube growth.

Weiwei Zhou, Lei Ding, Sungwoo Yang, Jie Liu

RESEARCHERS (BETA)

Anne Thoustrup Saber	630
National Research Centre for the Working Environment, Denm...	
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Second University of Naples, Italy	
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University of British Columbia, Canada	
Vaqar M Adhami	593
University of Wisconsin-Madison, United States	
William Chi Shing Cho	593
Queen Elizabeth Hospital, China	

SOURCE TITLES

Carbon	8,998
RSC Advances	7,944
Electrochimica Acta	7,641
Applied Surface Science	6,347
Sensors and Actuators B Chemical	5,905

FUNDERS

National Natural Science Foundation of China (N...	82,369
China	
Ministry of Science and Technology of the People...	24,556
China	
Ministry of Education of the People's Republic of ...	16,768
China	
European Commission (EC)	12,436
China	
National Research Foundation of Korea (NRF)	10,632
South Korea	

Ключевое слово поиска -- nanotubes (только публикации)

Building the publications backbone: Two steps

STEP

01

Getting a metadata backbone in place

Aggregating the large backbone - 90M publication records

STEP

02

Increasing discoverability

Enriching records by processing the full text; now done for 60M

* CrossRef, Pubmed, PubMed Central, jstage, arXiv, bioRxiv, Europe PubMed Central, OpenAire, and more

1. Data in Dimensions - publication metadata backbone



PUBLICATIONS

- Journal articles, pre-prints and books/book chapters
- 90 million records based on metadata
- Metadata and citations derived from multiple available databases
- OA tagging
- Rule-based document type identification

2. Record enrichment



PUBLICATIONS

- Direct relationships with 100+ key publishers
- Increased discoverability
- Highly contextualised - freely available
 - Related grants, publication references, related trials, related patents
- Improved representation additional to 'backbone'

Data in Dimensions - Grants currently

NIH

GRANTS

- Project funding
- 3.7M grants, from 250 funders globally
- \$1.3 trillion of funding
- **Sourcing**
 - Direct relationships with funders
 - Data available via APIs
 - Data openly available via websites

Dimensions

Support

Christian Rode

Close

MY ACCOUNT

Change password

Get currency

Get export format

Export center

ABOUT DIMENSIONS

About the grants data

Acknowledgements

Accessibility VWO

PRIVACY & TERMS

Privacy policy

Terms of use

About the grants data

Dimensions checks all sources of grant data for new data each month. Individual funders may have individual update dates over the year. The grant data contained in the current release is detailed below.

Funder	GRANT ID	Country	# Grants	Available Years
Japan Society for the Promotion of Science (JSPS)	grnt.34412.34	Japan	631,876	1964 - 2017
National Sciences and Engineering Research Council (NSERC)	grnt.482912.9	Canada	28,815	1991 - 2016
Russian Foundation for Basic Research (RFBR)	grnt.822894.6	Russia	170,838	1993 - 2017
National Natural Science Foundation of China (NSFC)	grnt.879896.5	China	160,808	1999 - 2016
German Research Foundation (DFG)	grnt.438130.8	Germany	189,815	1864 - 2017
European Commission (EC)	grnt.270363.3	Belgium	188,924	1981 - 2018
Directorate for Mathematical & Physical Sciences (NSF MPS)	grnt.487875.2	United States	88,708	1953 - 2018
Department of Defense Small Business Innovation Research (DOD SBIR)	grnt.873681.8	United States	73,866	1982 - 2015
Social Sciences and Humanities Research Council (SSHRC)	grnt.181883.8	Canada	71,889	1998 - 2018
Directorate for Engineering (NSF ENG)	grnt.481816.1	United States	69,692	1956 - 2018
Swiss National Science Foundation (SNF)	grnt.433888.8	Switzerland	66,940	1975 - 2018
National Endowment for the Humanities (NEH)	grnt.622295.2	United States	64,493	1953 - 2018
National Science Foundation (NSF)	grnt.631893.2	United States	62,600	1962 - 2017
Directorate for Neuroscience (NSF NSO)	grnt.481816.1	United States	60,847	1993 - 2018
Directorate for Biological Sciences (NSF BSC)	grnt.481746.1	United States	60,328	1962 - 2018
National Cancer Institute (NCI)	grnt.481736.3a	United States	58,258	1963 - 2017
Directorate for Computer & Information Science & Engineering (NSF CISE)	grnt.481746.1	United States	58,354	1960 - 2018
Canadian Institutes of Health Research (CIHR)	grnt.288883.8	Canada	48,842	1986 - 2018
National Institute of Allergy and Infectious Diseases (NIAID)	grnt.879896.5	United States	42,787	1978 - 2017
National Heart Lung and Blood Institute (NHLBI)	grnt.279892.8	United States	41,257	1963 - 2017
São Paulo Research Foundation (FAPESP)	grnt.432907.8	Brazil	38,855	1999 - 2018

Data in Dimensions - Patents **currently**

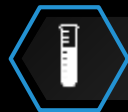


PATENTS

- US
- EP
- WIPO
- DE
- CA
- IN
- AU
- GB
- FR
- Hong Kong
- ... and more is coming

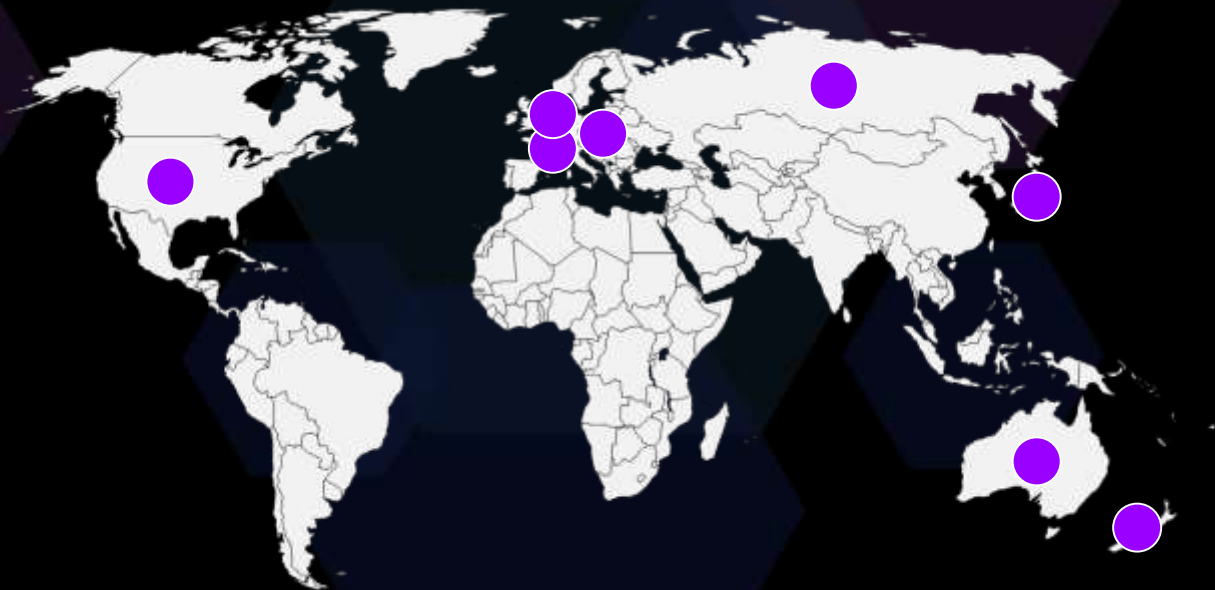


Data in Dimensions - Clinical Trials **currently**



CLINICAL TRIALS

- ClinicalTrials.gov
- EU-CTR
- UMIN-CTR
- ISRCTN
- ANZCTR
- CHICTR
- NTR - new
- GCTR - new
- ... and more are coming



Links between the different content sources



Publication

- Publication references
- Publication citations
- Supporting grants
- Patent citations
- Linked clinical trials



Grant

- Resulting publications
- Resulting patents
- Resulting clinical trials



Patent

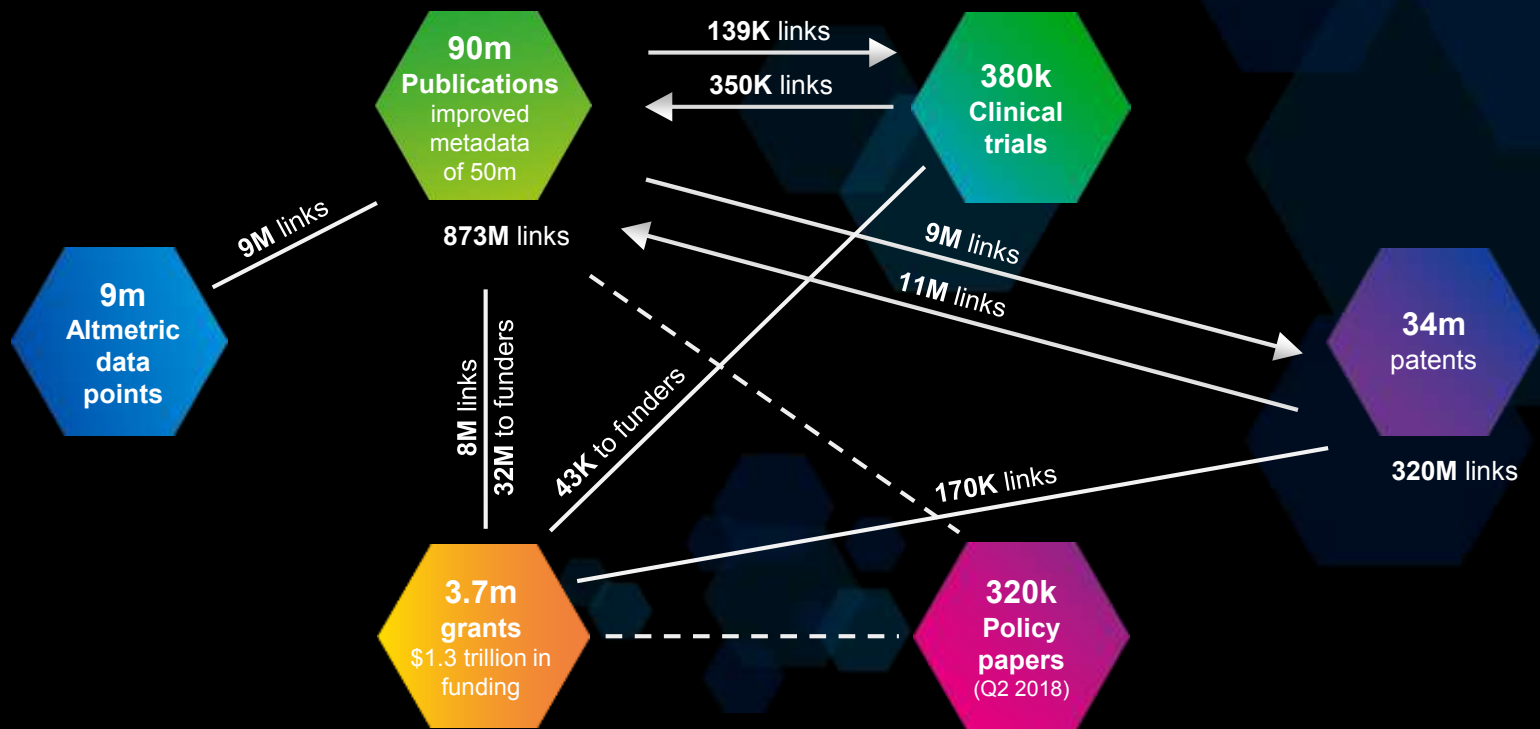
- Patent references
- Publication references
- Supporting grants
- Patent citations



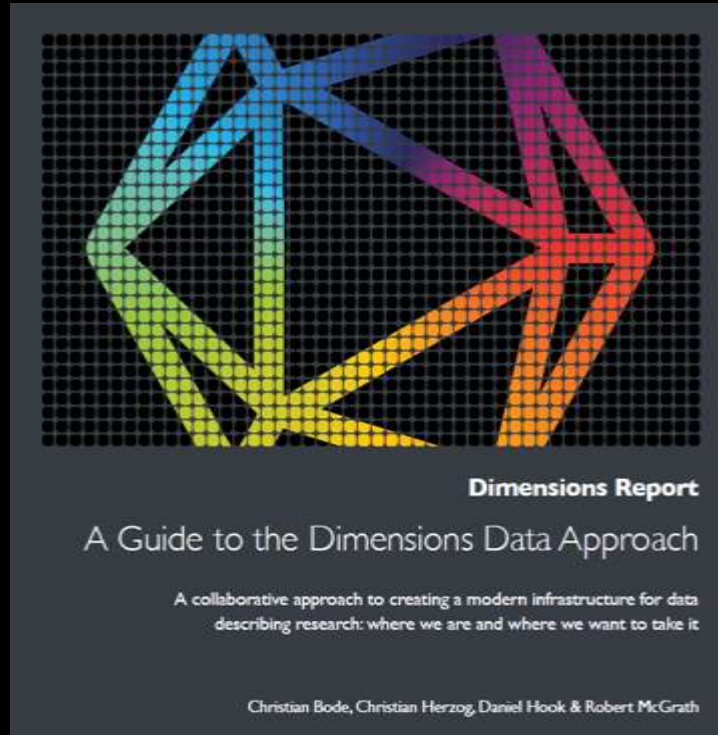
Clinical trial

- Linked publications
- Supporting grants

The data and links in Dimensions...



Data Behind Dimensions – open review



<https://doi.org/10.6084/m9.figshare.5783094.v5>



<https://doi.org/10.6084/m9.figshare.5783160.v1>

Dimensions and metrics

We do not want
to impose
metrics ...



... metrics
should be
developed by
the community

... for a
discipline,
national or
institutional
level.

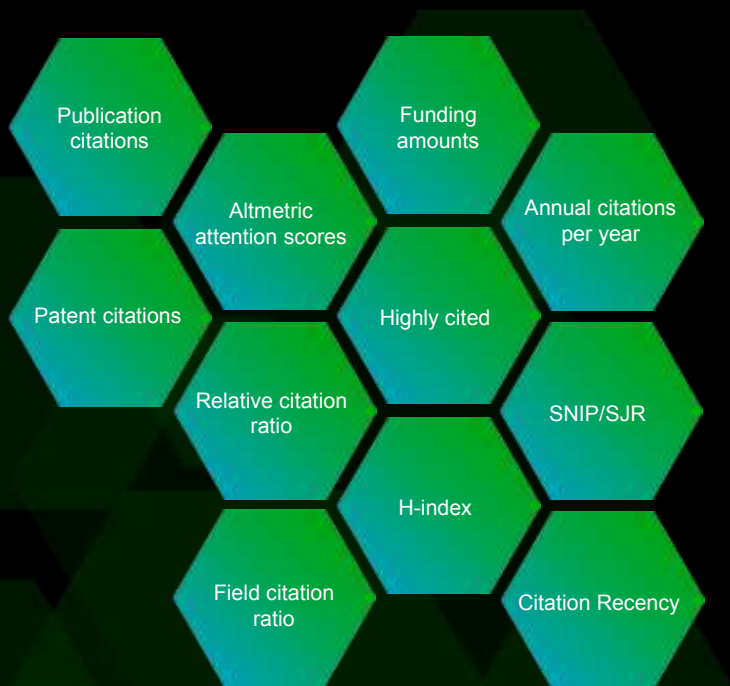
Example of a
partner metric:

Relative
Citation Ratio
(RCR)



... please join
the efforts for
more and / or
better metrics!

The metrics in Dimensions - close to the data...



...with an invitation to the bibliometric community to do research on innovative metrics on the Dimensions data and tool platform since Digital Science does not want to impose new metrics

Showcasing Dimensions citations

Introducing the new Dimensions badges

- Dynamic visualization
- Features total citations, recent citations, RCR and FCR
- Free for non-commercial use on researcher sites
- Visit: badge.dimensions.ai



Details pages just like Altmetric

Summary of citation data

- Up to 3 most recent citations and chart of citations over time
- Click over for full list
- Overview of research categories citing the article
- Based on FoR research categories



Integrations are already up and running

Lookup reference Edit reference

[Aalborg University Library in Denmark](#)

ARTICLE

Minimal Intensity Physical Activity (Standing and Walking) of Longer Duration Improves Insulin Action and Plasma Lipids More than Shorter Periods of Moderate to Vigorous Exercise (Cycling) in Sedentary Subjects When Energy Expenditure Is Comparable

Duvalvier, Bernard M. F. M. · Schaper, Nicolaas C. · Bremers, Michelle A. · van Crombrugge, Glenn · Menheere, Paul P. C. A. · Kars, Marleen · et. al.

In: [PLoS One](#), Vol. 8, Iss. 2, 2013-2-13, p. e55542

FULL-TEXT ACCESS IS AVAILABLE VIA:

2006-latest	PubMed Central
2006-latest	Directory of Open Access Journals
2006-latest	EBSCOhost Academic Search Premier
2006-latest	Free Medical Journals

CITE AND EXPORT

- Cite
- Export to RefWorks
- Export to Mendeley
- Export to EndNoteV
- Save to RIS format
- Save to BibTeX format
- Make permalink

CITES AND MENTIONS

- Cited 121 times in Scopus™
- Cited 34 times in PubMed Central
- Cited 111 times in Web of Science®
- Has a score of 560 in Altmetric
- Has 135 citations in Dimensions

94. Pharos: Collating Protein Information

Nguyen, D.-T.; Mathias, S.; Bologna, C.; Brunak, S.; Jensen, L.J.; Karlsson, A.; Lu, G.; Mayan, A.; Patel, J.; Rouillard, A.D.; Schurer, S.; Sheils, T.; Vidovic, D.; Waller, A.; J., Y.; Jadhav, A.; Oprea, S.

Nucl. Acids Res., **2017**, 45(D1), D995-D1002

[Personal research site](#)

”	8	Total citations
↺	8	Recent citations
⚙	n/a	Field Citation Ratio
⚙	0	Relative Citation Ratio

genome



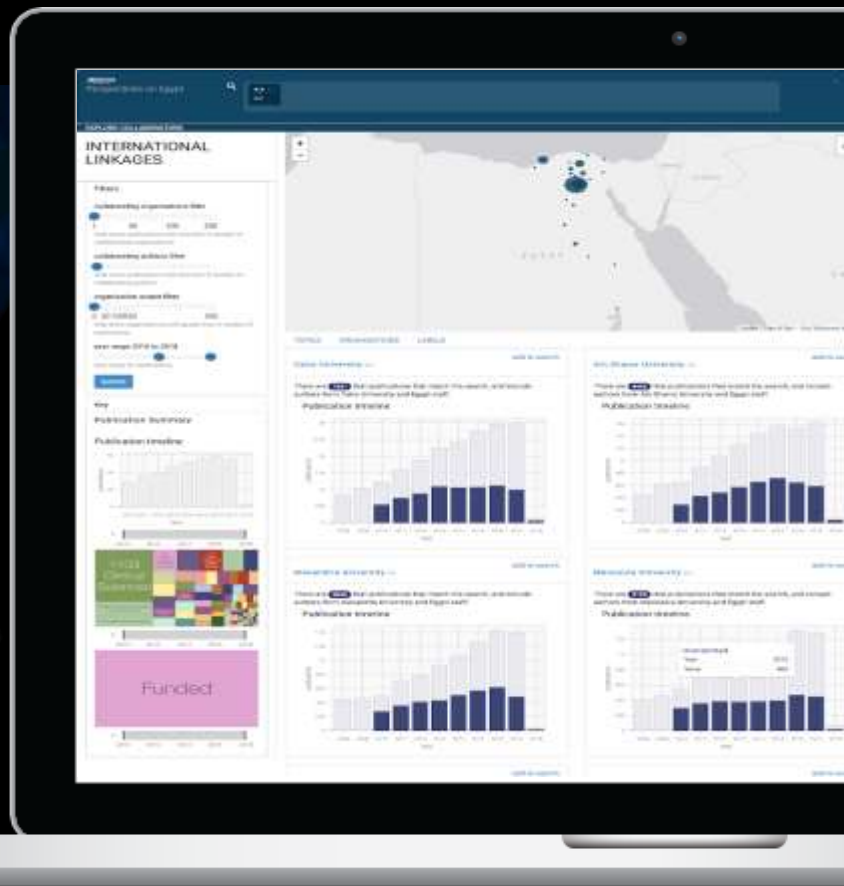
[DOI 10.1093/nar/gkw1072]

The Dimensions API

Innovate

- Build your own in house applications based on the Dimensions API

Example: International Linkages dashboard...



The Dimensions API

Innovate

- Invent your own metrics

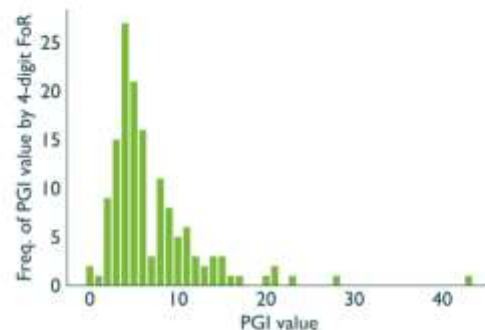
Example: PGI (publications per active grant)



A Composite Indicator for Publications per Grant

The Dimensions platform provides access to global data for both grants and publications and makes possible the construction of links between different aspects of research. The dataset will enable increasingly sophisticated composite indicators to be created as needed by the research community. We explored a simple composite indicator: the ratio of publications to active grants. This is an imperfect representation of research inputs and outputs, but it offers real value for exploratory purposes. For example, a high ratio of publications to grants (relative to a subject average) might indicate: research areas that do not attract grant funding (e.g. Complementary Medicine); strong industry funding (e.g. Pharmaceutical companies); or internally collaborative research.

To create a Publications-to-Grants Indicator (PGI), we took articles published after 2015 and compared this to a count of active grants in the period 2015-17. Active grant count (as opposed to the funding amount) addresses varying award lengths and funding systems in different countries and is more meaningful for cross-disciplinary comparisons. Indicators were calculated for data grouped in categories denoted by common FoR codes for grant and publication classification.



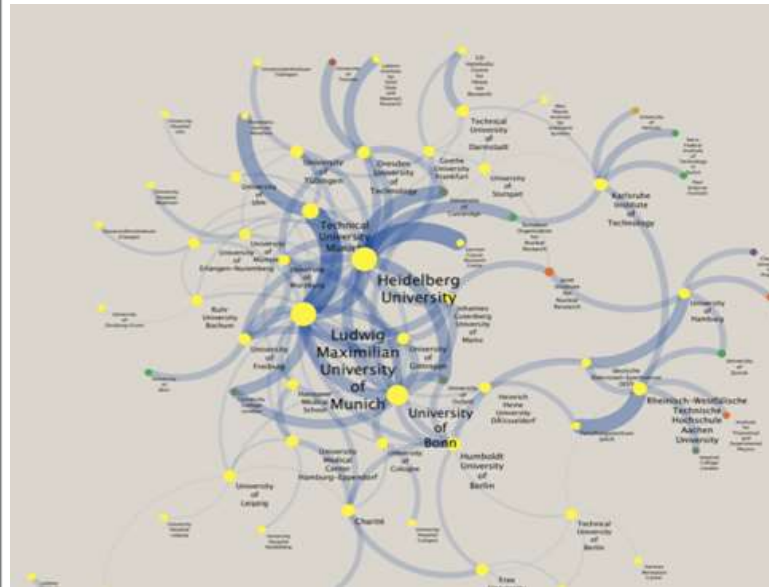
Dimensions will enable increasingly sophisticated composite indicators to be created by the research community

The Dimensions API

Innovate

- Ask new questions of the Data
- ...or even just automate current analysis tasks that you normally do by hand

Top 30 research institutions and their top 5 collaborators by publication volume 2010-2017



Благодарен за Ваше внимание!

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