

The power and the promise of Infrastructure for Open Research



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Mark Hahnel, CEO

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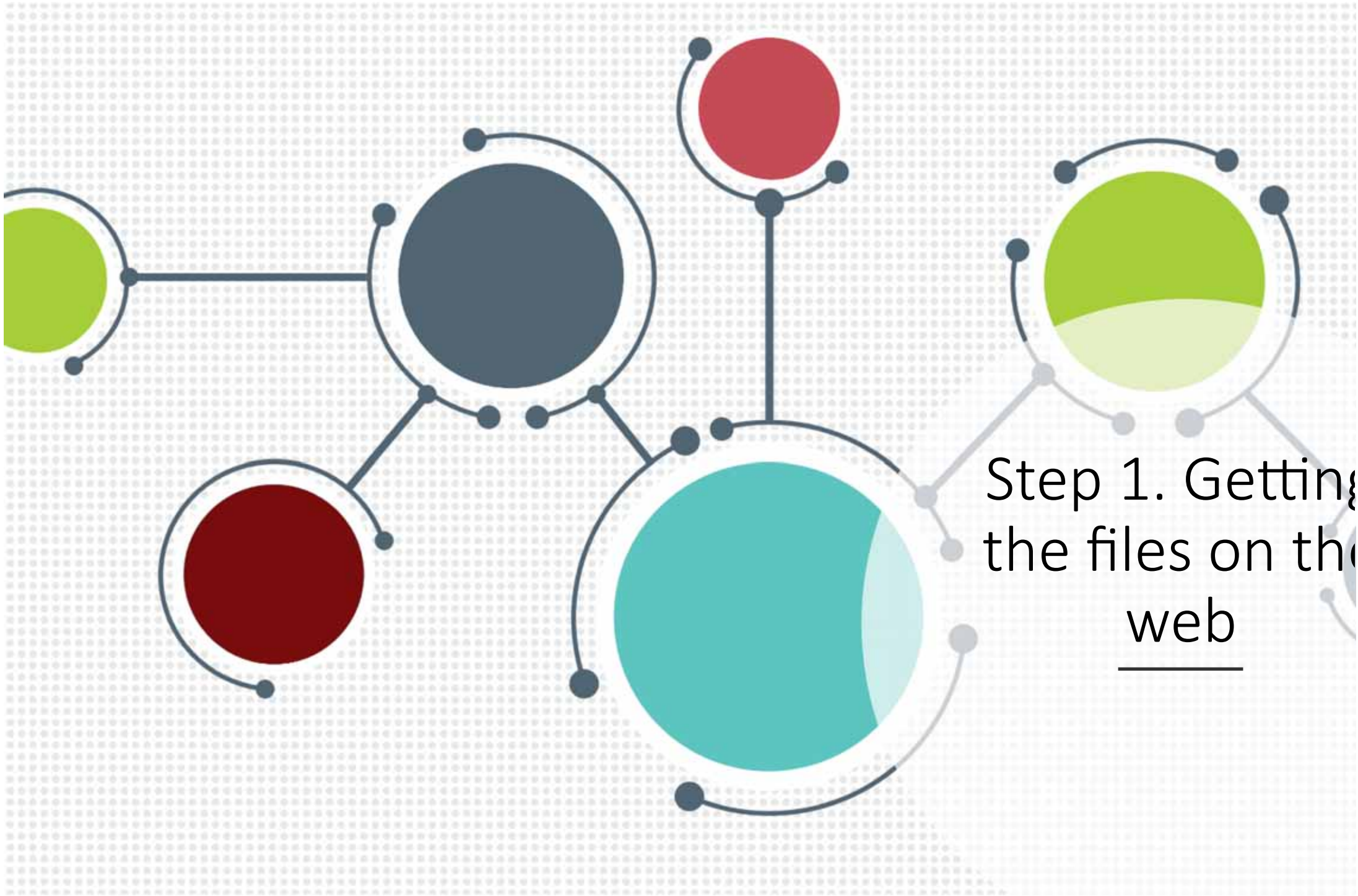
researchers



publishers



institutions



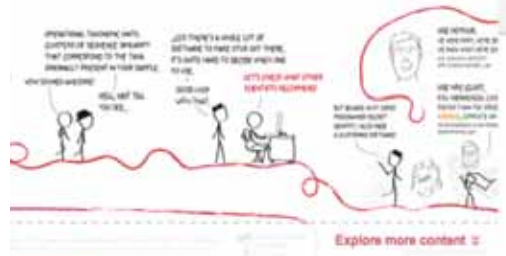
Step 1. Getting
the files on the
web

NESS, REPRODUCIBILITY AND ECOLOGICAL CONSISTENCY DEMARICATION OF OPERATIONAL TAXONOMIC UNITS



3 SCHMIDT JOAO F. MATIAS RODRIGUES CHRISTIAN VON MERING

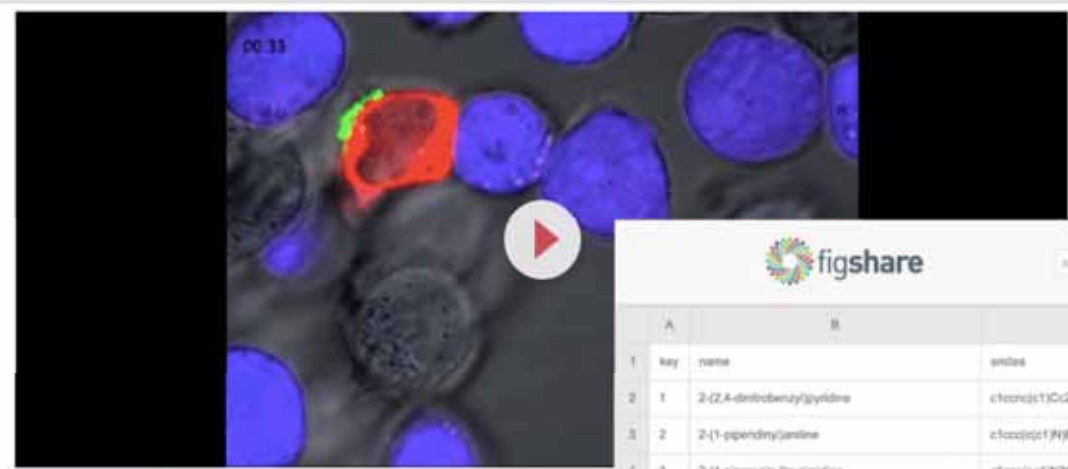
INFORMATICS, INSTITUTE OF MOLECULAR LIFE SCIENCES, UNIVERSITY OF ZÜRICH, WINTERTHURERSTR.



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J robustness, reproducibility & ecological consistency



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<https://dx.doi.org/10.5072/FK2.figshare.2001555>

Retrieved 15:24, Aug 14, 2015 (GMT)

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1	key	name	smiles	mpC	csid	link
2	1	2-(2,4-dinitrobenzyl)pyridine	c1ccc(c1)C(=O)O[C@H]2N=CN=C2	92	64018	http://www.efta.com/en/GP100W/pgm7055TK-B241
3	2	2-(1-piperidinyl)amine	c1ccc(c1)N1CCCCC1	46	403764	http://www.efta.com/en/GP100W/pgm7055TK-A130
4	3	2-(1-piperazinyl)pyrimidine	c1ccc(c1)N2CCNCC2	33	80080	http://www.efta.com/en/GP100W/pgm7055TK-L158
5	4	2-(1-piperazinyl)phenol	c1ccc(c1)N2CCNCC2O	128	63701	http://www.efta.com/en/GP100W/pgm7055TK-B202
6	5	2-(1-cyclohexenyl)ethylamine	C1CCC(=CC1)CCN	-85	68386	http://www.efta.com/en/GP100W/pgm7055TK-L0821
7	6	2-(1-foo-4-piperidinyl)pyrrolidine	CC(C)C(OC)C1N1CCC(CC1)OCC1O1NC	85	25027436	http://www.efta.com/en/GP100W/pgm7055TK-H329
8	7	2-(1-foo-4-piperidinyl)pyrrolidine	CC(C)C(OC)C1N1CCC(CC1)OCC1O1NC	88	25027435	http://www.efta.com/en/GP100W/pgm7055TK-H330

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Sheet1 [Sheet2] [Sheet3] BradleyMelling/OpenMeltingPointDataset.xlsx (2.12 MB) MD5: 6a4690289e8377a5333209

Cite Download (3.12 MB) Share Embed + Collected (you need to log in first)

Jean-Claude Bradley Open Melting Point Dataset

Version 2 20.05.2014, 19:29 by Jean-Claude Bradley, Antony Williams, Andrew Lang

4388 views 2143 downloads 2 citations

Jean-Claude Bradley's Legacy Dataset of Open Melting Points. 28,645 measurements including those found to be incorrect (marked as 'do not use'). csid corresponds to ChempSpider ID.



reate co-occurrence networks

is notebook creates co-occurrence networks and exports them to .gexf-files, either at the start of a new book or chapter or one network for all selected books / chapters.

ser variables

which Bible passages to create co-occurrence networks for
 -I matches the last chapter/verse, Useful when selecting a
 passages = {
 "Biblical_1" [1,1,-1,-1]

what range the co-occurrence networks should have

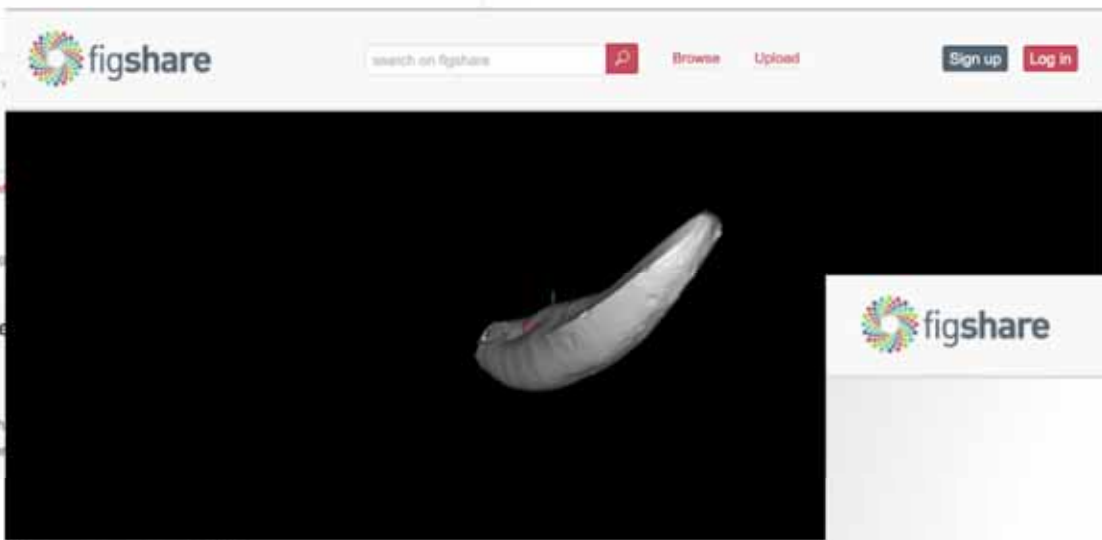
verses.gexf (18.69 MB)

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ing social co-occurrence networks to analyze ical narrative

016, 18.26 by Frederik de Vries

is and code of MSc thesis Artificial Intelligence on VU Amsterdam, with
 social co-occurrence networks to analyze Biblical narrative" by Frederik



01-Allosaur tooth rooted.stl (6.95 MB)

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UWO-VPC-2013.001-Allosaur tooth rooted

21.02.2014, 21:55 by Joseph Peterson

582 Views

Scanned with a Nextengine Desktop 3D Scanner and Scan Studio Pro (NextEngine) on high resolution settings. Model composed of 72,989 vertices and 145,758 faces. Saved as an *.stl file in MeshLab (v.1.3.2).

CATEGORIES
 Paleontology google-roman-archa... gexf (291.99 kB)

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Mapping the Structure of the Archaeological Web

Version 2 29.04.2014, 17:03 by Shawn Graham

718 views 58 downloads

A fileset to accompany an article in a special issue of *Internet Archaeology*. In this article, I map the structure of the web to understand the context of archaeological blogging.



Why Publishers?

- Path of least resistance
- Author Services

Why figshare?

- Compliance
- Technology
- Pace of change
- APIs



AMERICAN CHEMICAL SOCIETY

SPRINGER NATURE



F1000



ou don't have an API, you may as well not exist

cs.figshare.com

n clone whole public site
All metadata (JSON-LD, OAI-PMH, RDF)
Can pull all files

metrics available on everything
Time-stamped
Geotagged

Notable Users

- PubMed
- Clarivate Data Citation Index
- Research Data Australia
- SHARE



figshare Pull requests Issues Gist

Repositories 51 Code 17K Commits 4K Issues 1K Wikis 293

17,802 code results Sort

hubgit/figshare-mirror - dat.json
Showing the top three matches Last indexed on Sep 19, 2016

```
1 {
2   "name": "figshare",
3   "description": "figshare files",
4   "publisher": "figshare"
5 }
```

feup-infolab/dendro - package.json
Showing the top two matches Last indexed on Sep 24, 2016

```
1 {
2   "name": "figshare",
3   "version": "0.0.1",
4   "main": "figshare.js"
5
6 }
```

timcdlucas/statsforbios - .gitignore
Showing the top match Last indexed on Sep 16, 2016

FAIR

Dataset | Evaluation of data repositories based on the FAIR Principles for IDCC 2017 practice paper

Link/cite as doi:10.4121/uuid:5146dd06-98e4-426c-9ae5-dc8fa65c549f (show link code) | full citation

go to DATA section

title	Evaluation of data repositories based on the FAIR Principles for IDCC 2017 practice paper
creator	Dunning, A.C. (Alastair)
creator	de Smaele, M.M.E. (Madeleine)
creator	Böhmer, J.K. (Jasmin)
contributor	4TU.Centre for Research Data
contributor	TU Delft Library
date accepted	2017-02-02
date created	2016-11-01 through 2017-01-30
date published	2017
description	Corresponding data-set to IDCC 2017 Practice Paper 'Are the FAIR-Principles fair?'. Excel Spreadsheet with overview and categories, frequency and proportion statistics, and graphs of 37 data repositories in the Netherlands and Europe. Compliance Evaluation is based on the principles and facets of the FAIR principles; re3data.org is the source for the data repositories.
language	en
publisher	TU Delft
subject	Data Management & Evaluation of FAIR Data Principles & Metrics 2020
in collection	General collection
time coverage	days_2016-11



About

Community

Best Practices

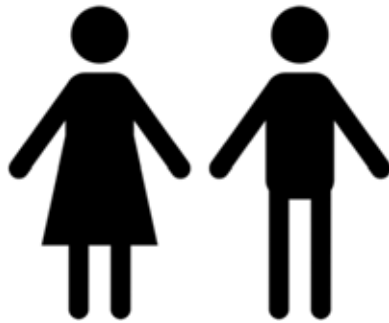
Software

/data.4tu.nl/
repository/uuid:
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dc8fa65c549f

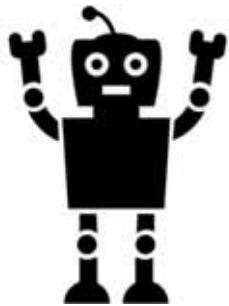
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A Comparative Review of Various Data Repositories

<https://docs.google.com/spreadsheets/d/1KptHzDHldB3s1v5m1mMwphcwXhOVWdkRYdjEWW1dc/edit#gid=355072175>



FAIR



FA

The State of Open Data

The State of Open Data 2017



Public Funder
Jean-Claude Burgelman, European Commission

Private Funder
Robert Kiley & David Carr, Wellcome Trust

Repository Space
Mark Hahnel, Figshare

University
Dale Peters, University of Cape Town

Publisher
Grace Baynes, Springer Nature

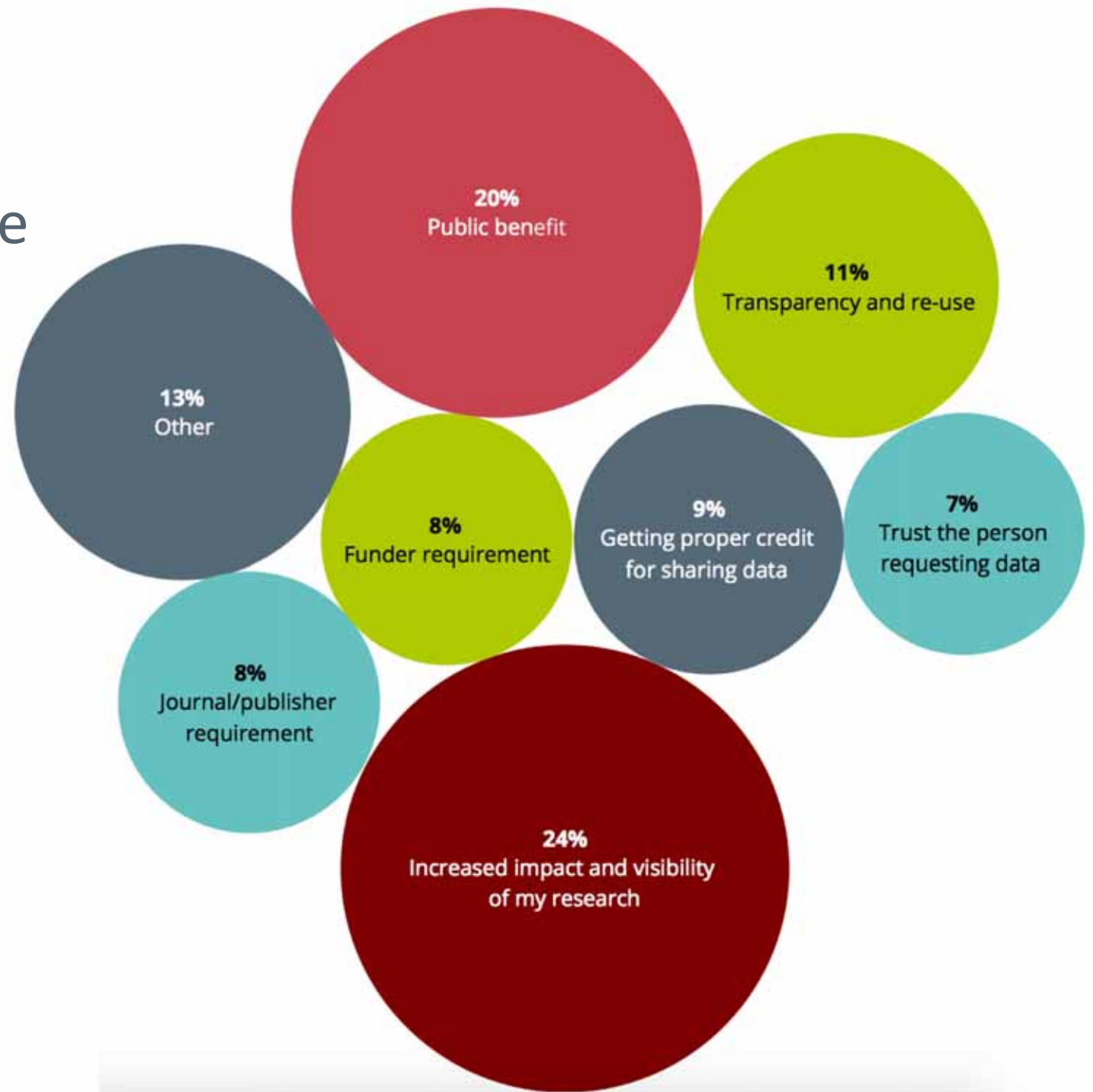
2359 responses



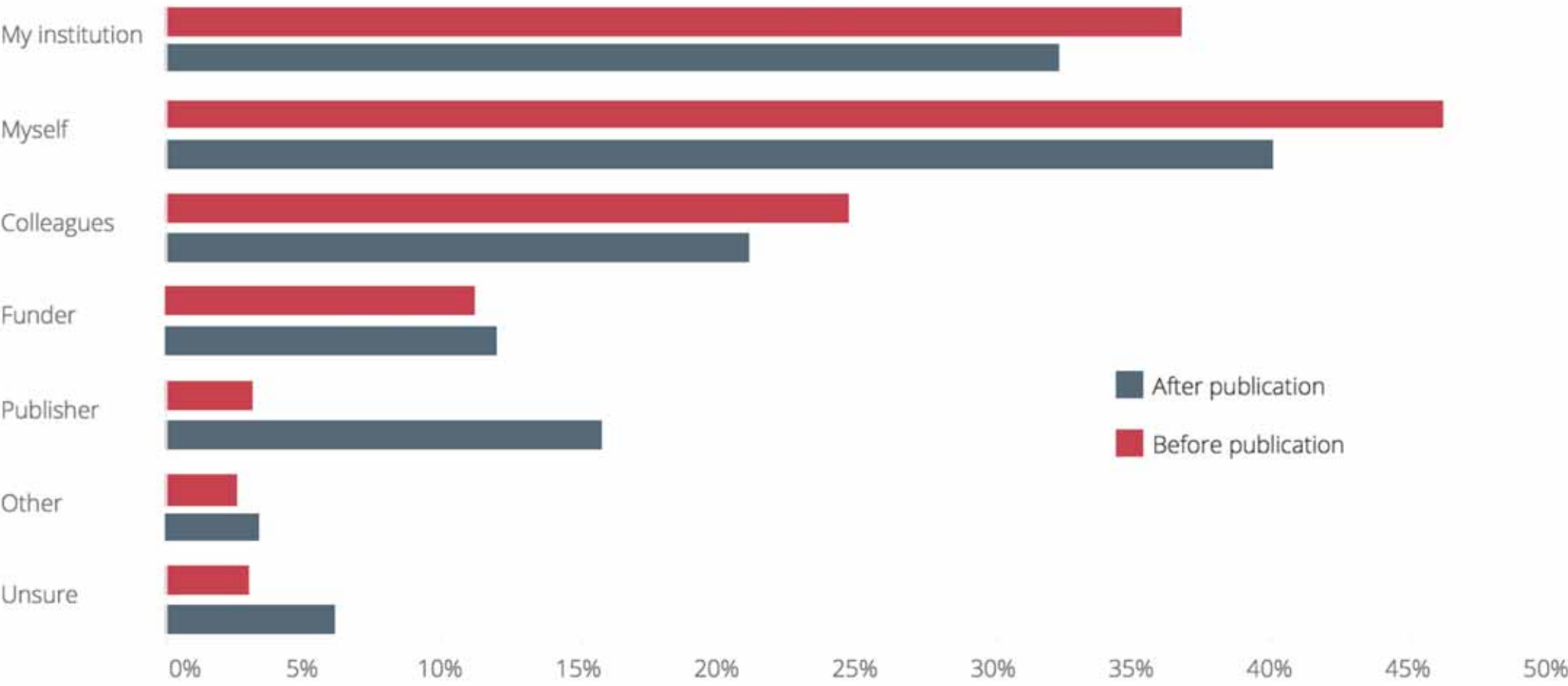
Researchers awareness of Open Data



What motivates researchers to share the data?



Who owns the data?



Other Takeaways

Status

- 79% of researchers have made data openly available
- Majority of researchers support a national open data mandate

Incentives

- Researchers are most motivated to share data by increasing their profile and doing things for the public benefit, transparency and re-use over publisher and funder mandates
- 77% of researchers value a data citation as much or more than an article citation (validating last years findings)
- 92% of researchers motivated to share their data if it leads to citation

Education

- Majority of researchers think they don't have a publisher, funder or institutional mandate to share data
- Majority of researchers think they own their data
- Majority of researchers don't understand creative commons licenses
- Only approx 25% of researchers look to their library for advice on data sharing
- Majority of researchers still using physical media to store and archive their data
- 83% of reported data loss happened as a result of using physical media

at of 3 'Aint Bad.
en Will Open Research
ation Make it Through
ose Generating
Research?



Step 2. Education as priority?



tep 2. Curation?



nn5b07472_si_001.avl (4.65 MB)

MD5: a047f85a16e11f24a951bd1857129cbf |

← Mechanical Chameleon through Dynamic Real-Time Plasmonic Tuning

15.02.2015, 13:40 by Hua Wang Xien, Xu Fan, Xu Wang

The development of camouflage methods, often through a general

CATEGORIES

- [Cheminformatics and Quantitative Structure-Activity Relationships](#)
- [Chemical Thermodynamics and Energetics](#)
- [Complex Physical Systems](#)
- [Geophysics](#)
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Title

Mechanical Chameleon through Dynamic Real-Time Plasmonic Tuning

Authors

[Hua Wang Xien](#) [Xu Fan](#) [Xu Wang](#) Enter collaborators also...

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Media

Tags

[chameleon](#) [plasmonic](#) [tuning](#) Add tags for discovery

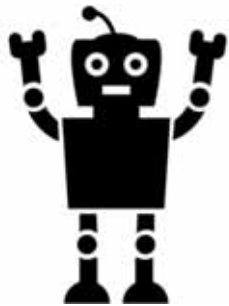
Description

The development of camouflage methods, often through a general resemblance to the background, has recently become a subject of intense research. However, an artificial, active camouflage that provides fast response to color change in the full-visible range for rapid background matching remains a daunting challenge. To this end, we report a method, based on the combination of bimetallic nanodot arrays and electrochemical bias, to allow for plasmonic modulation. Importantly, our approach permits real-time light manipulation readily matchable to the color setting in a given environment.

B *I* U \times_2 \times^2



FAIR



FAIR

National Non-Traditional Research Output Portal



e.g. data.funderx.com

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Region or subject specific 'Data' Portals



e.g. genomics.funderx.com

AUTOPOPULATED

Portals for each grant code



normalisation and mapping to Funded Grant Code



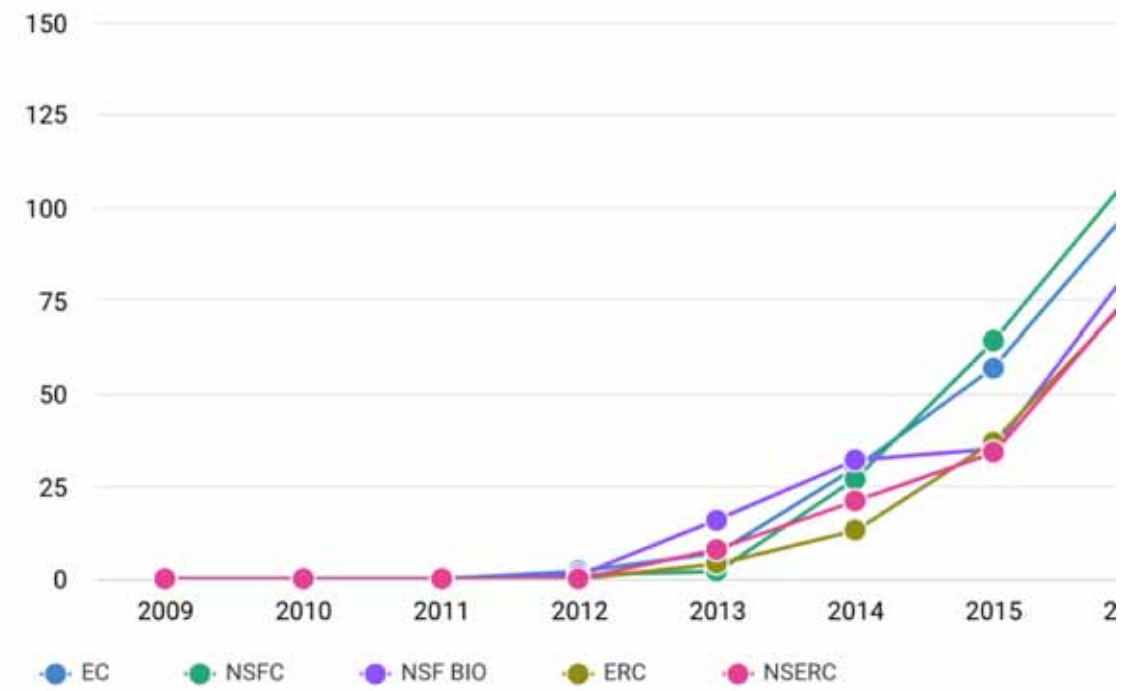
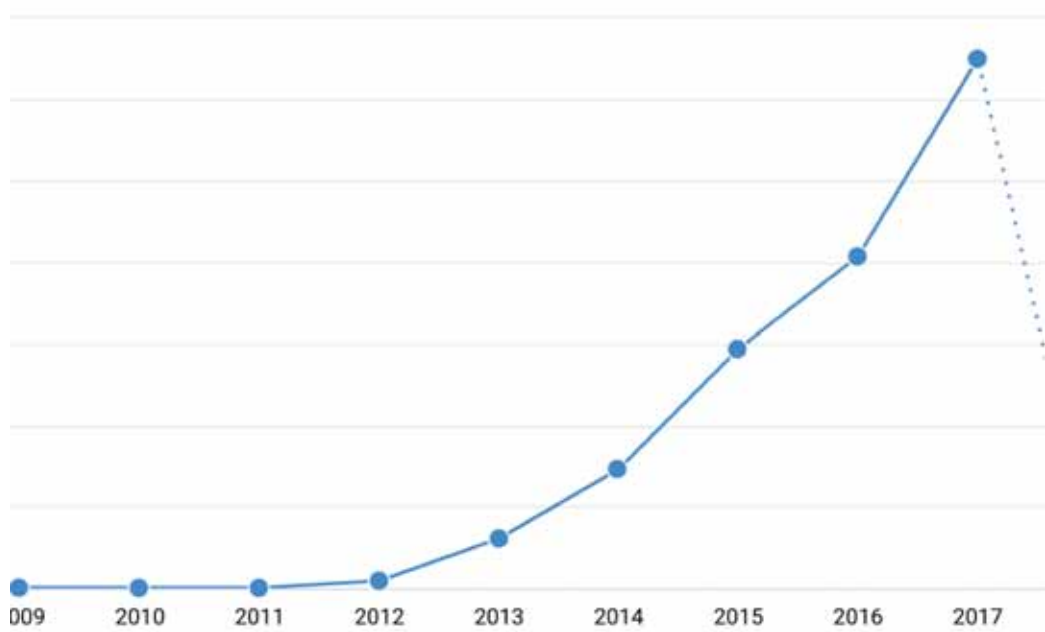
and Institution using GRID, UberResearch and FundRef

Funded Researcher Uploads

Academic Publisher Datasets
from e.g. SpringerNature,
ACS, Wiley, etc.

Migration or ingest of
data from other
Funded Repositories, or
Institutional Data Repositories

Migration or ingest of data
from popular repositories¹
e.g. Figshare, Dryad, Zenodo



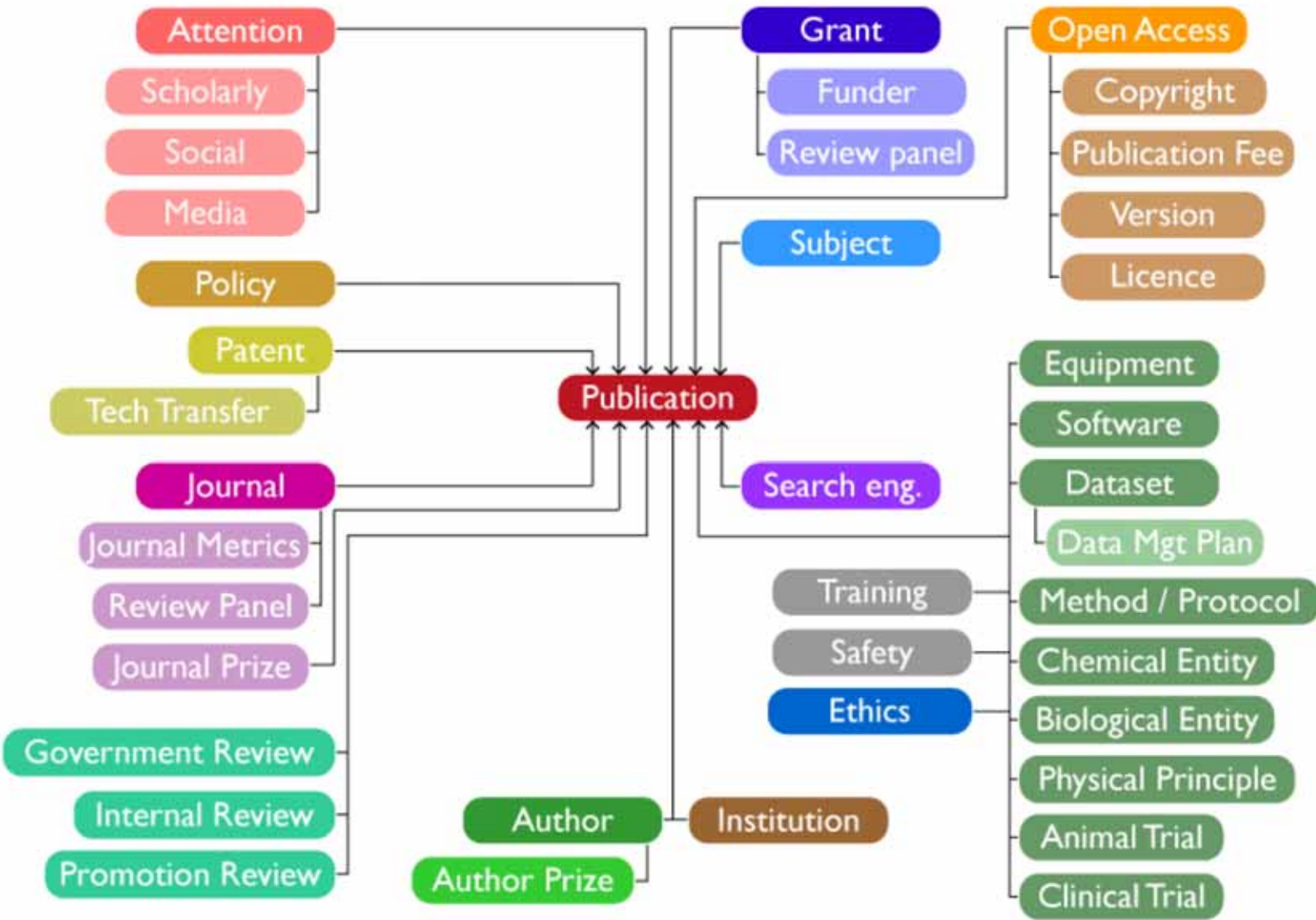


	↓ Publications Relevant	FCR Mean	RCR Mean	Altmetric A... % mentioned	Altmetric ... Median
mission (EC)	1,413	2.89	1.01	73.6	5.5
arch Council (ERC)	1,024	3.50	1.17	82.9	10.0
ament Research Council (NERC)	173	3.39	1.16	93.6	14.5
onomy, Industry and Competitiveness (MI...)	155	2.78	0.98	78.7	8.0
rch Foundation (DFG)	136	3.00	1.09	72.1	7.0
l Science Foundation (SNF)	128	4.03	1.15	88.3	10.5
id Physical Sciences Research Council (E...)	121	2.78	0.83	66.1	3.0
it (WT)	120	4.70	2.48	91.7	10.0
ty for Research (ANR)	111	3.54	1.21	77.5	6.0
and Biological Sciences Research Council...	104	5.01	1.60	88.5	13.0

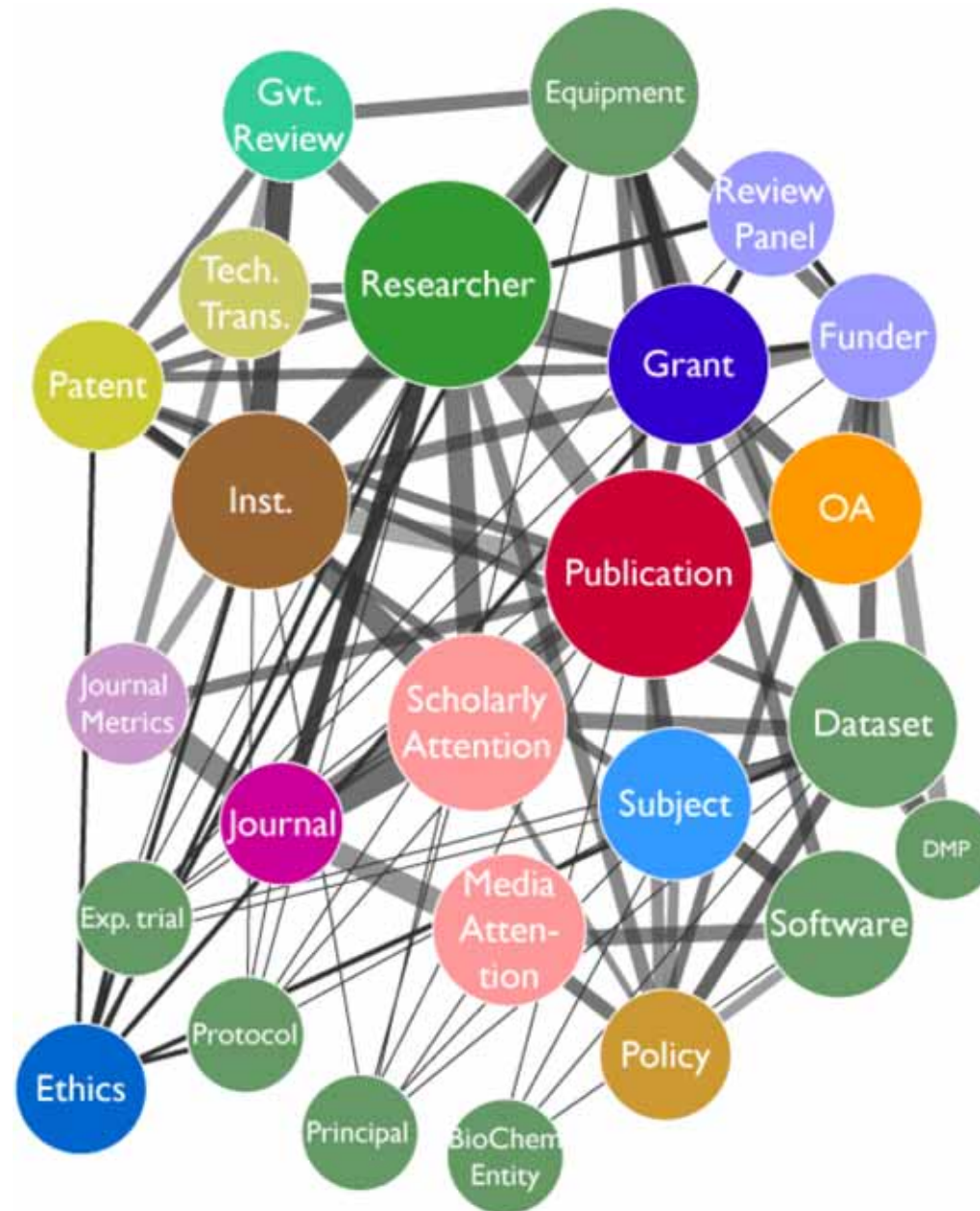
	EC	ERC	NERC	MINECO	DFG	SNF	EPSRC	WT
0604 Genetics	469	381	87	56	0	62	0	39
0602 Ecology	339	193	56	42	0	29	0	0
0502 Environmental ...	214	81	25	25	0	10	0	0
0603 Evolutionary Bi...	63	95	19	10	0	15	0	0
1701 Psychology	49	83	0	0	12	0	0	9
1109 Neurosciences	63	50	0	0	16	0	0	7
0801 Artificial Intelli...	75	31	0	7	8	0	10	0
0601 Biochemistry a...	52	52	0	0	11	6	7	15
0806 Information Sy...	66	9	0	0	3	0	0	3
0607 Plant Biology	46	27	10	9	5	6	0	0
0605 Microbiology	26	37	7	5	5	5	0	4
0104 Statistics	32	26	0	6	3	4	5	3
0501 Ecological Appl...	44	15	10	5	0	0	0	0
1108 Medical Micro...	32	25	9	0	0	0	0	13
0299 Other Physical ...	25	25	0	5	5	5	7	0
1117 Public Health a...	31	10	0	0	0	0	0	9
0306 Physical Chemi...	23	20	0	0	0	0	15	0
0803 Computer Soft...	32	6	0	0	3	0	7	0
0705 Forestry Scienc...	25	16	10	4	0	0	0	0
0403 Geology	22	18	0	5	0	0	4	0



e expanding universe



e New Universe



National Non-Traditional Research Output Portal



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Region or subject specific 'Data' Portals



e.g. genomics.funderx.com

AUTOPOPULATED

Portals for each grant code



normalisation and mapping to Funded Grant Code



and Institution using GRID, UberResearch and FundRef

Funded Researcher Uploads

Academic Publisher Datasets
from e.g. SpringerNature,
ACS, Wiley, etc.

Migration or ingest of
data from other
Funded Repositories, or
Institutional Data Repositories

Migration or ingest of data
from popular repositories³
e.g. Figshare, Dryad, Zenodo



Mark Hahnel

Function: CEO

email: mark@figshare.com

@markhahnel

@figshare



Some of team figshare's beliefs

Academic research outputs should be as open as possible, as closed as necessary

Academic research outputs should never be behind a paywall

Academic research outputs should be human and machine readable/query-able

Academic infrastructure should be interchangeable

Academic researchers should never have to put the same information into multiple systems at the same institution

Identifiers for everything

The impact of research is independent of where it is published and what type of output it is