

WHY IT CAN BENEFIT YOUR RESEARCH







WHO AM!?

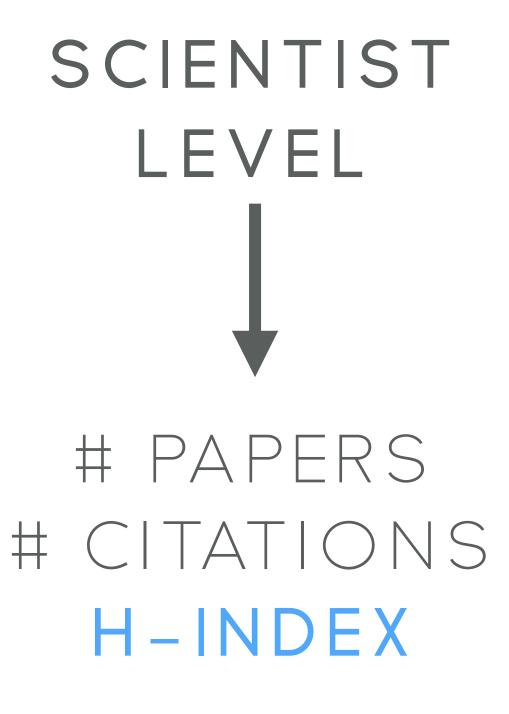
- ASSISTANT PROFESSOR
- FORSCHUNGSZENTRUM JULICH/ UCLOUVAIN
- PLANT MODELLING
- IMAGE ANALYSIS
- WATER MOVEMENT IN SOIL-PLANTS

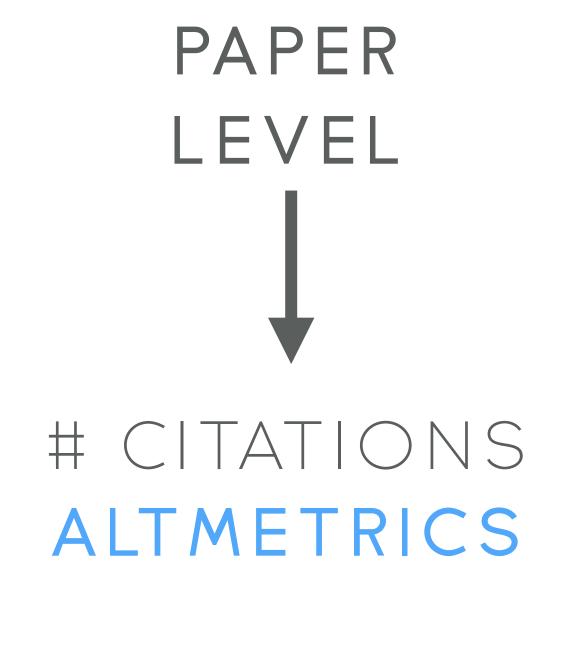


PRODUCTIVITY METRICS

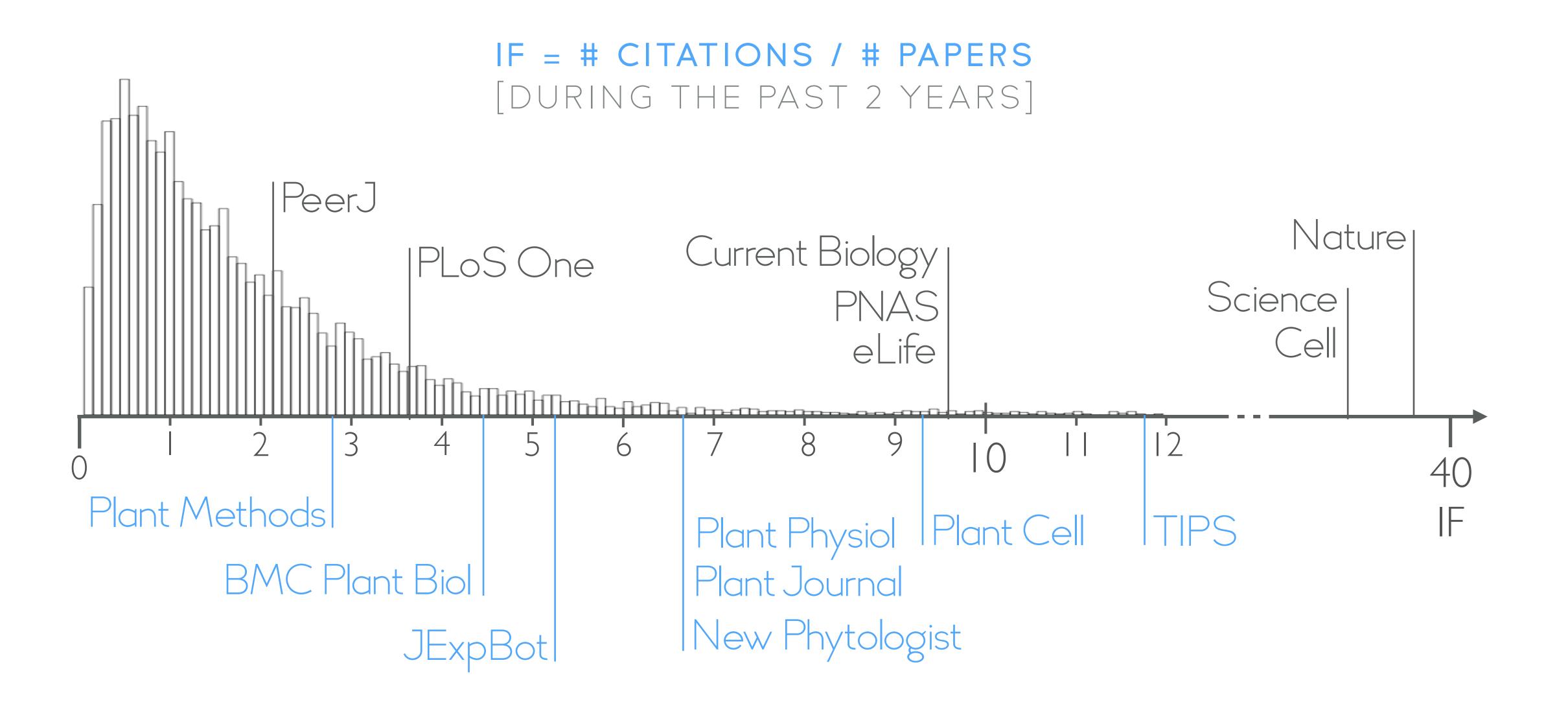
WHY? EVALUATIONS, GRANTS AND NEW POSITION



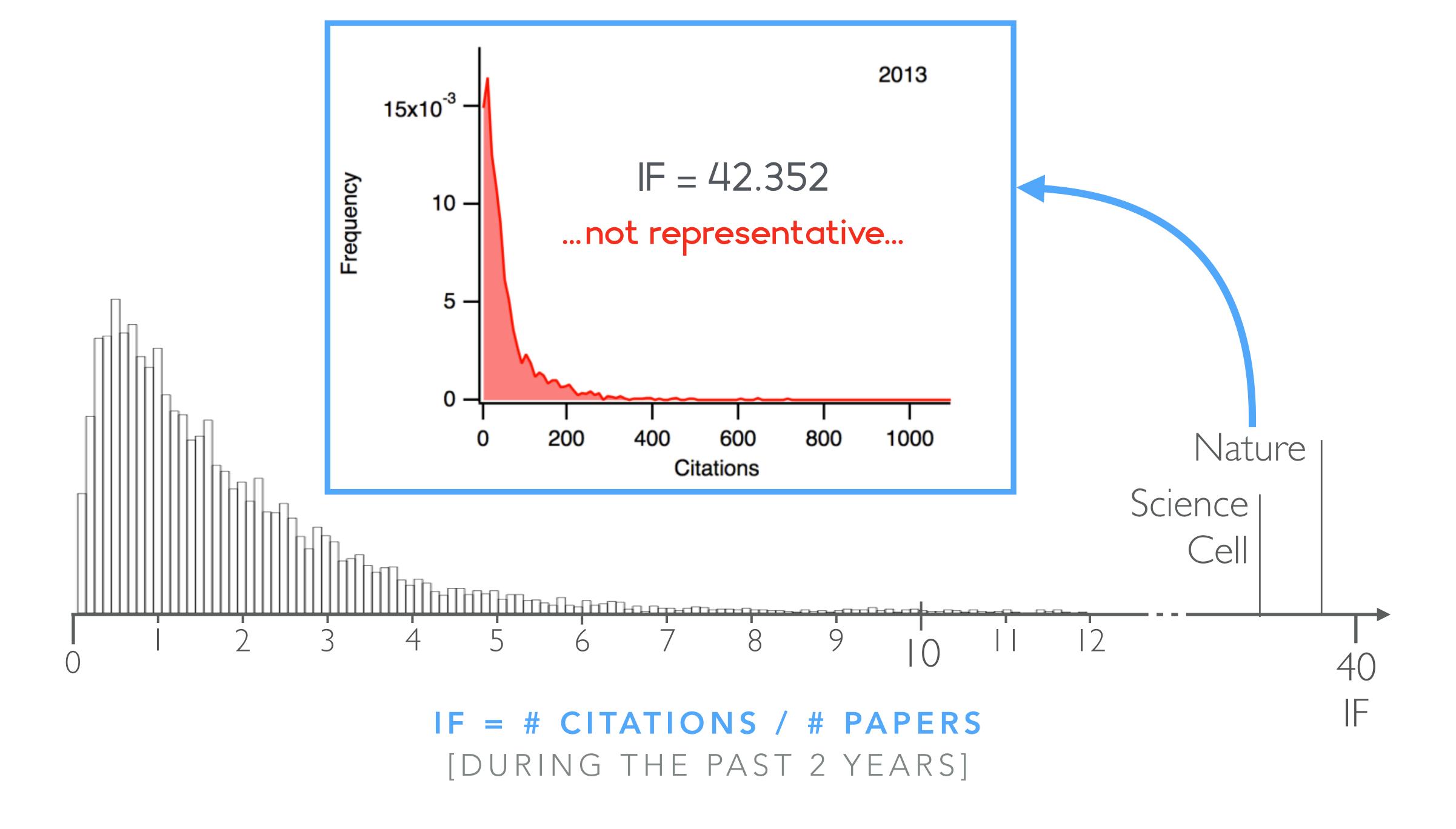




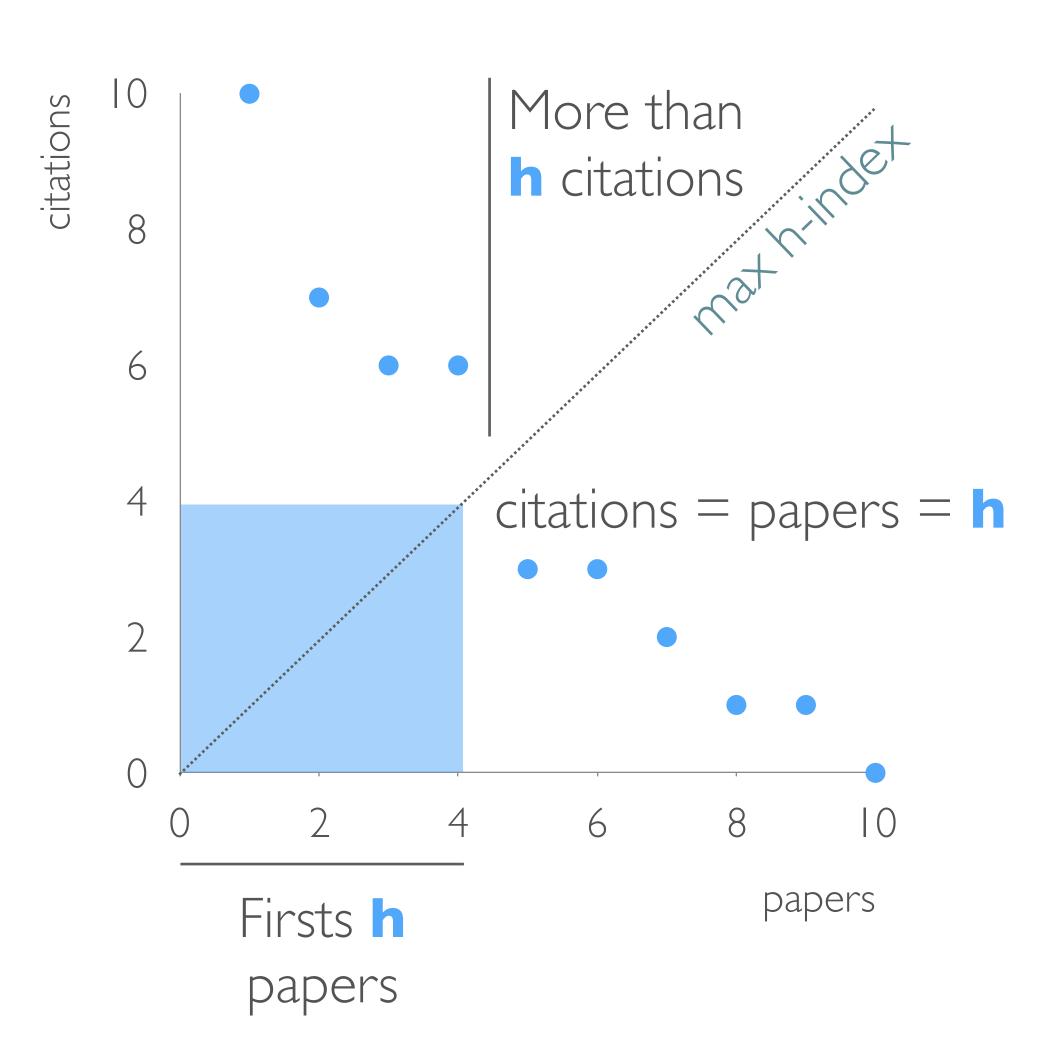
IMPACT FACTOR – JOURNAL LEVEL



Source: ISI Journal Citation Report



H - INDEX - RESEARCHER I FVFI

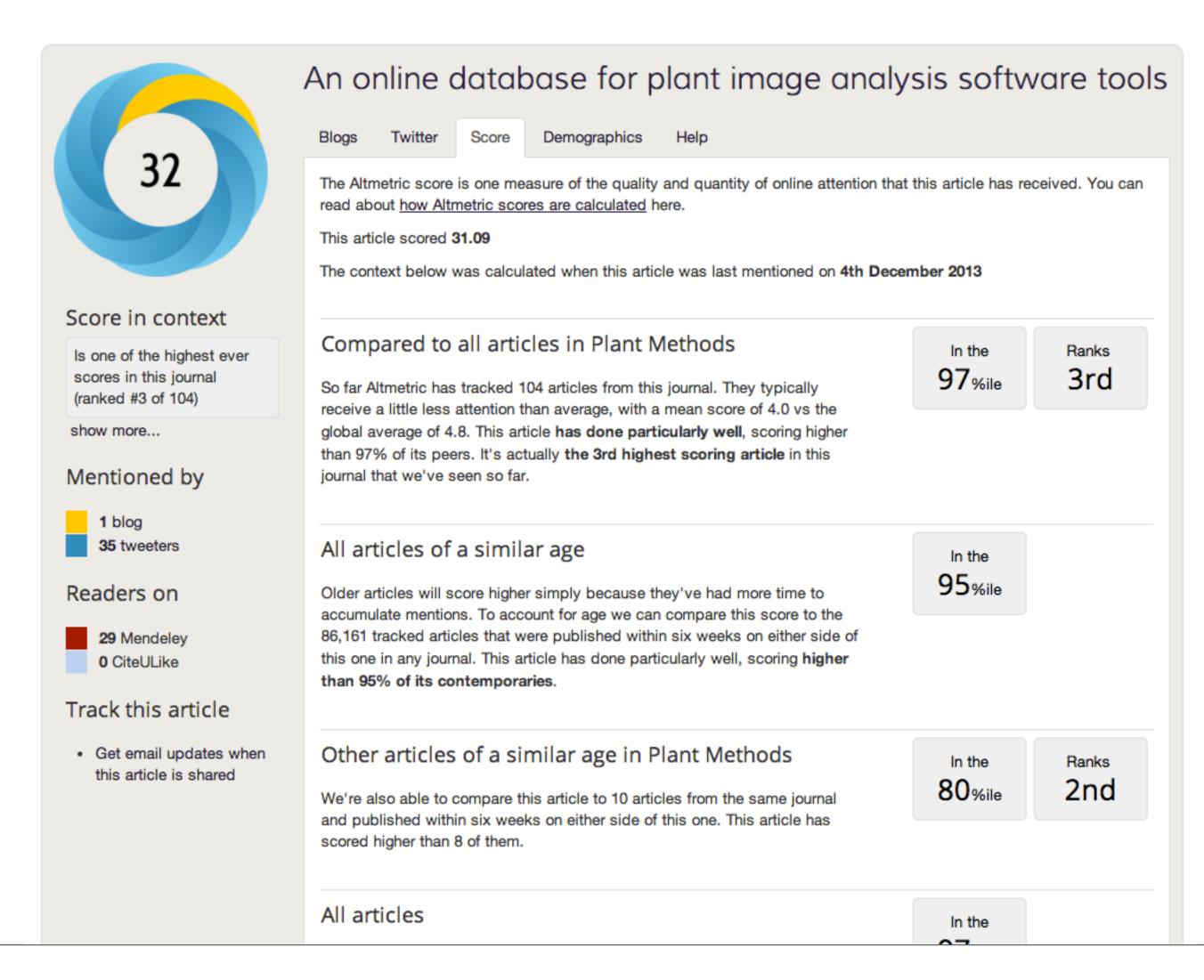


A scientist has index h if h of his/her n papers have at least h citations each, and the other (n - h) papers have no more than h citations each.



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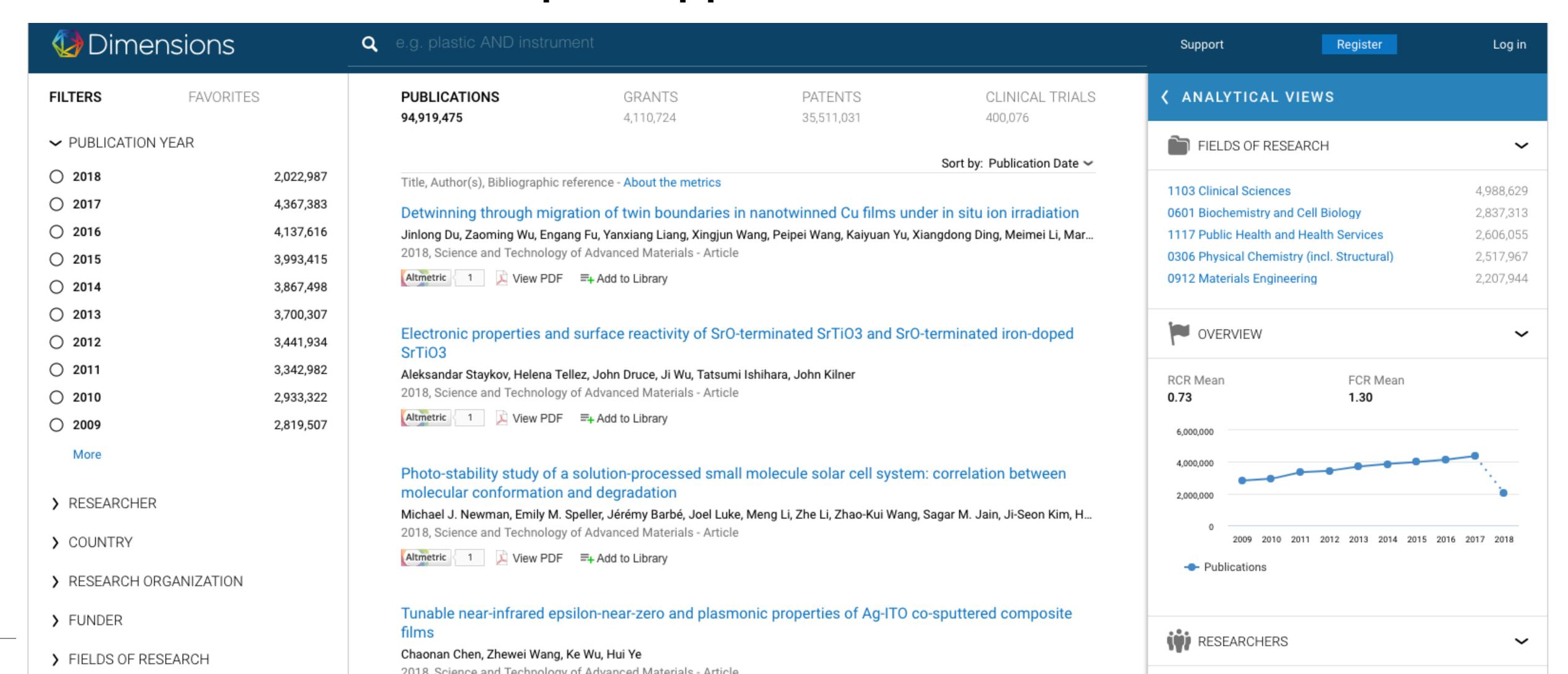
The Relative Citation Ratio (RCR) indicates the relative citation performance of an article, when compared to other articles in its area of research. The RCR is normalized to 1.0 and calculated for all articles funded by the NIH in the Dimensions catalog. An RCR of more than 1.0 shows that a publication has an above average citation rate for its group, when defined by the subject area citation rates of the articles that have been cited with it.

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- Link to all articles can be found on www.guillaumelobet.be.
- Bibliometric data are coming from dimensions.ai and altmetric.com.
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- The Altmetric Score is an automatically calculated, weighted count of all of the attention a research output has received online.



archiDART, an R package for the automated 2D computation of plant root architectural traits

Delory, B., C. Baudson, Y. Brostaux, G. Lobet, and P. du Jardin 2015 | Citation(s): 6 | FCR: 4.91 | Altmetric score: 24 URL: http://dx.doi.org/10.1007/s11104-015-2673-4

Root System Markup Language. Toward an unified root architecture description language

Lobet, G., M. Pound, J. Diener, C. Pradal, X. Draye, C. Godin, M. Javaux, D. Leitner, F. Meunier, and P. Nacry 2015 | Citation(s): 31 | FCR: 16.5 | Altmetric score: 34 URL: http://www.ncbi.nlm.nih.gov/pubmed/25614065

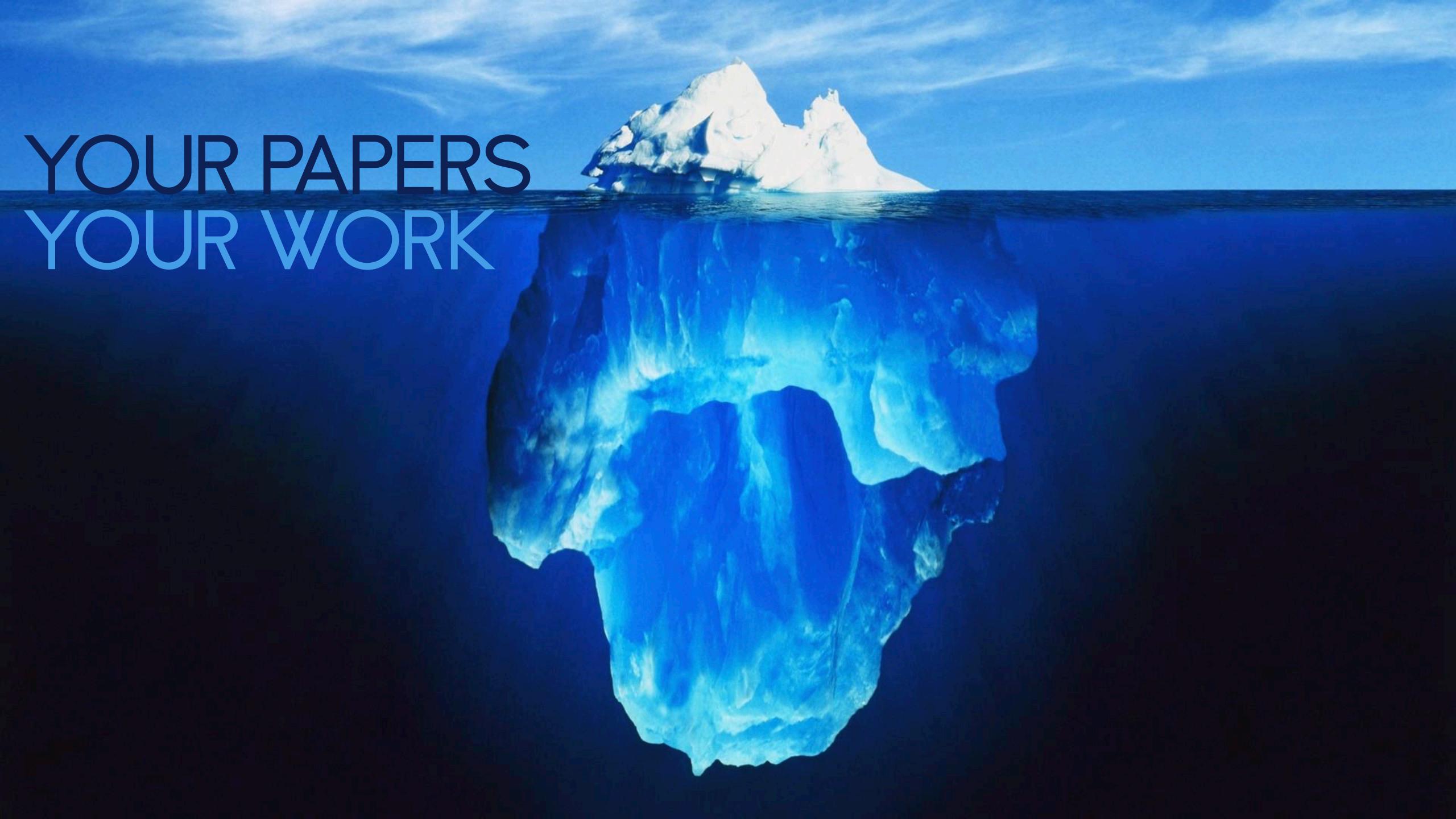
It is clear that the language will help empower plant biologists and computation scientist working in root phenotyping and modeling fields to leverage and share work more efficiently with others. [Anonymous Reviewer 2]

MY CURRENT CV

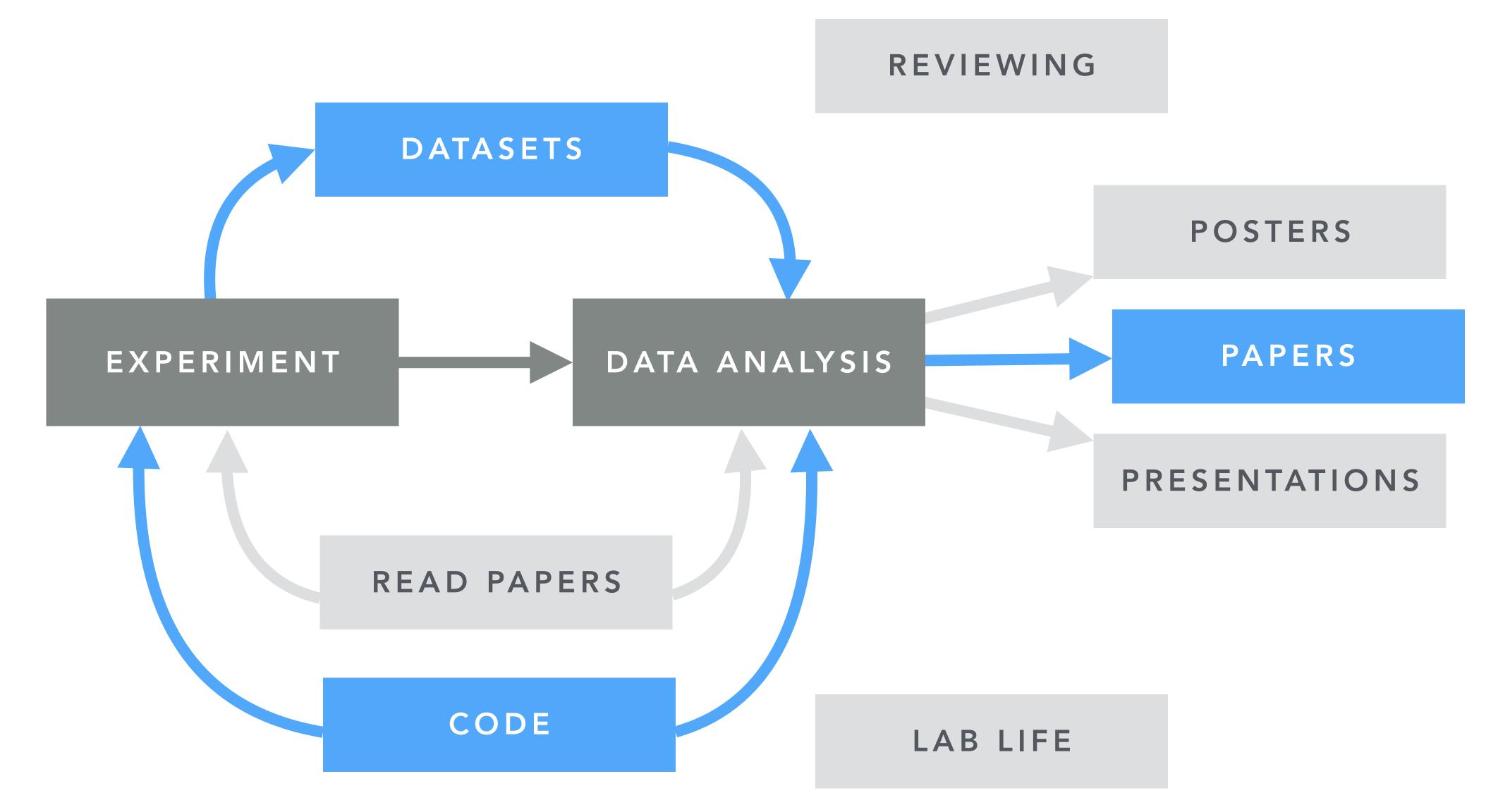
Explanation of metrics before publication list

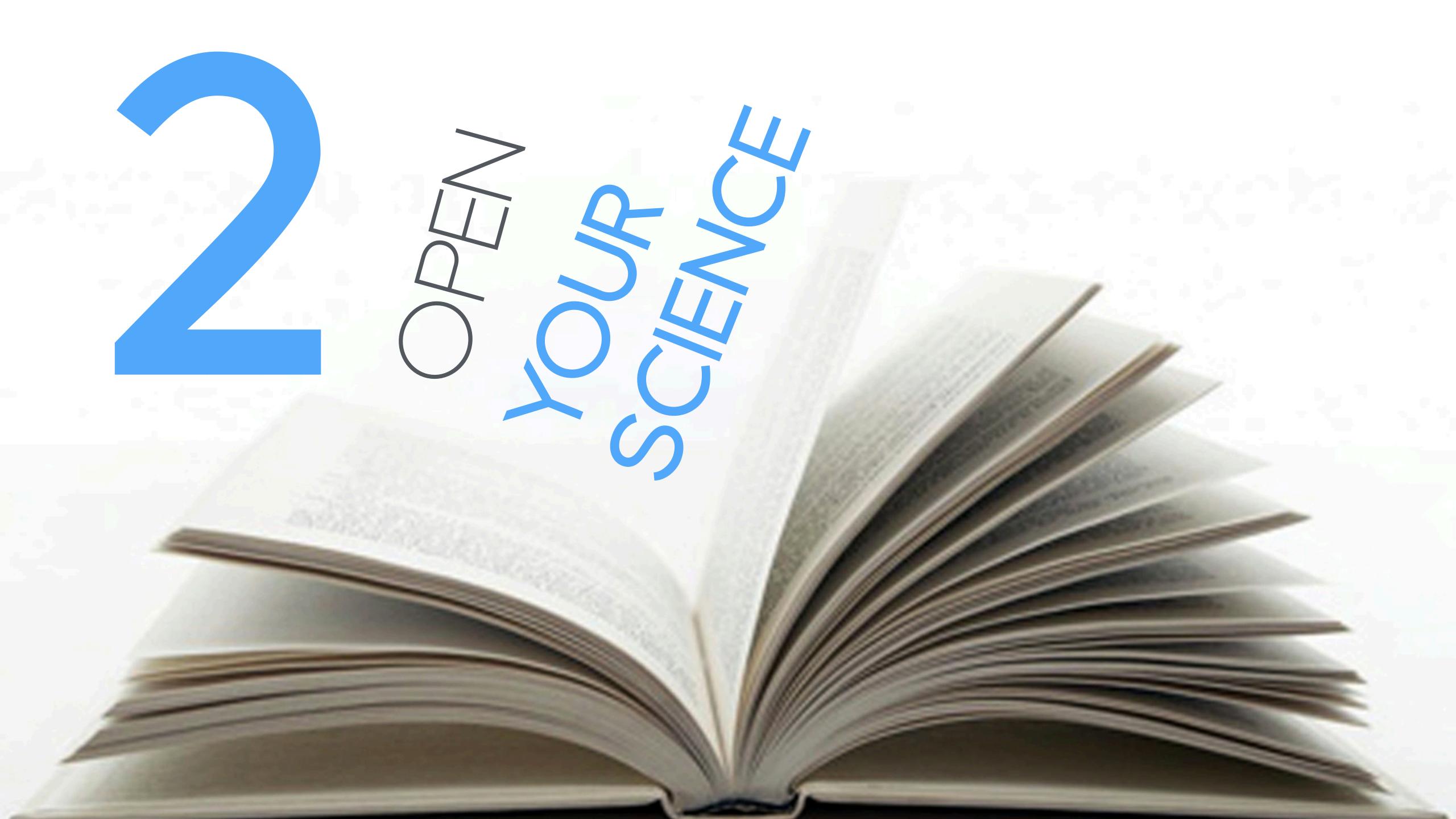
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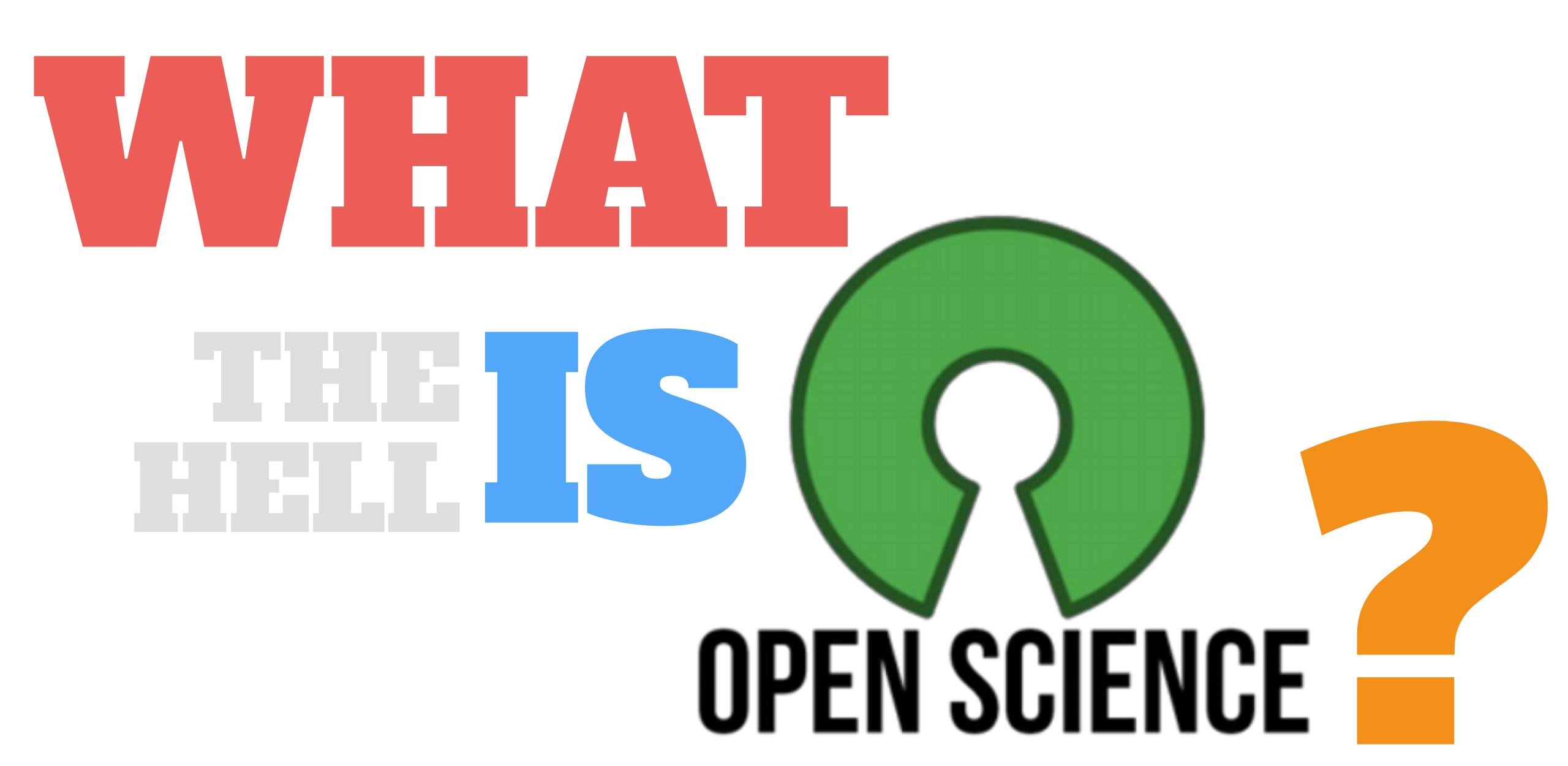
https://github.com/guillaumelobet/science curriculum



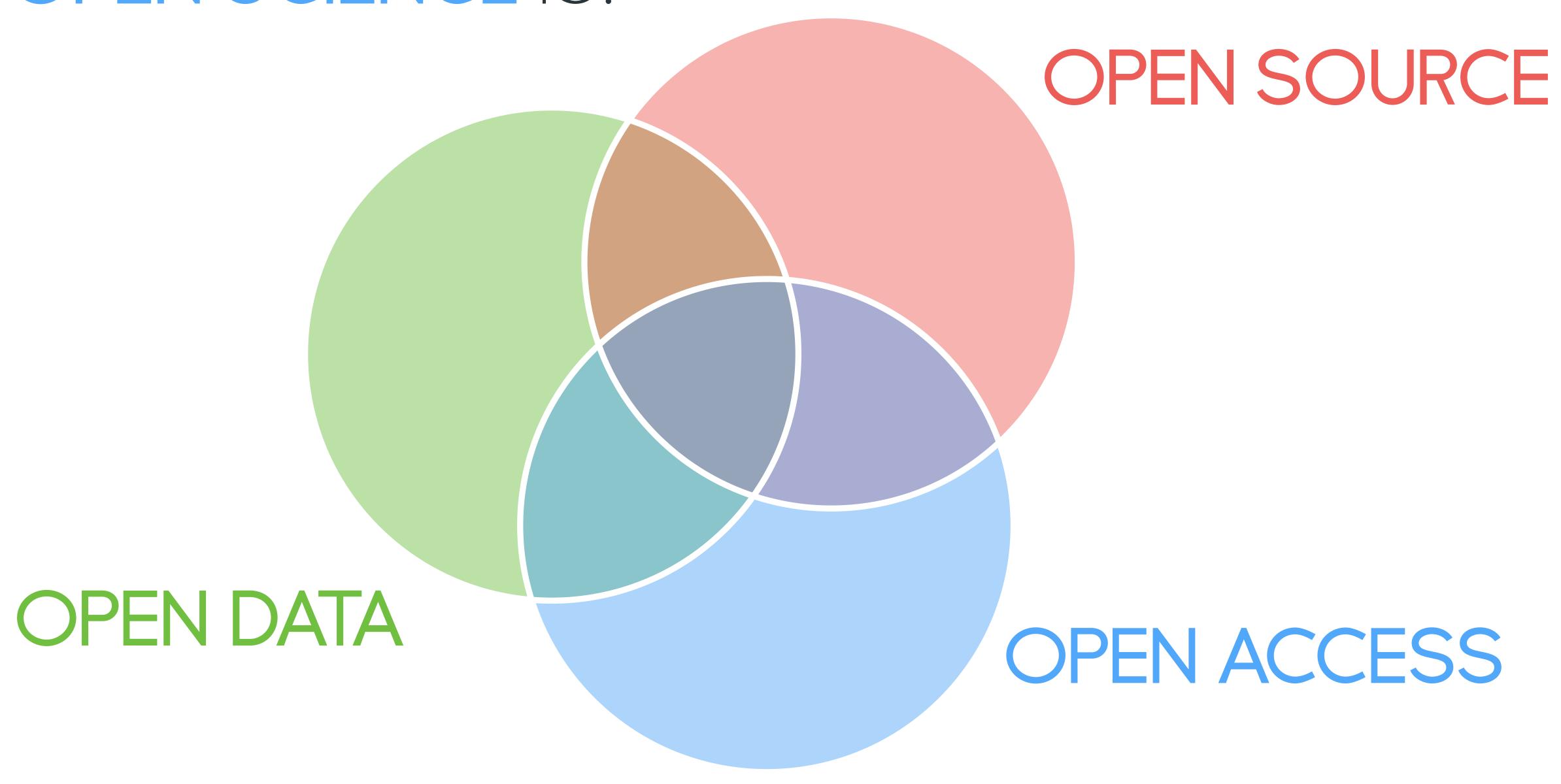
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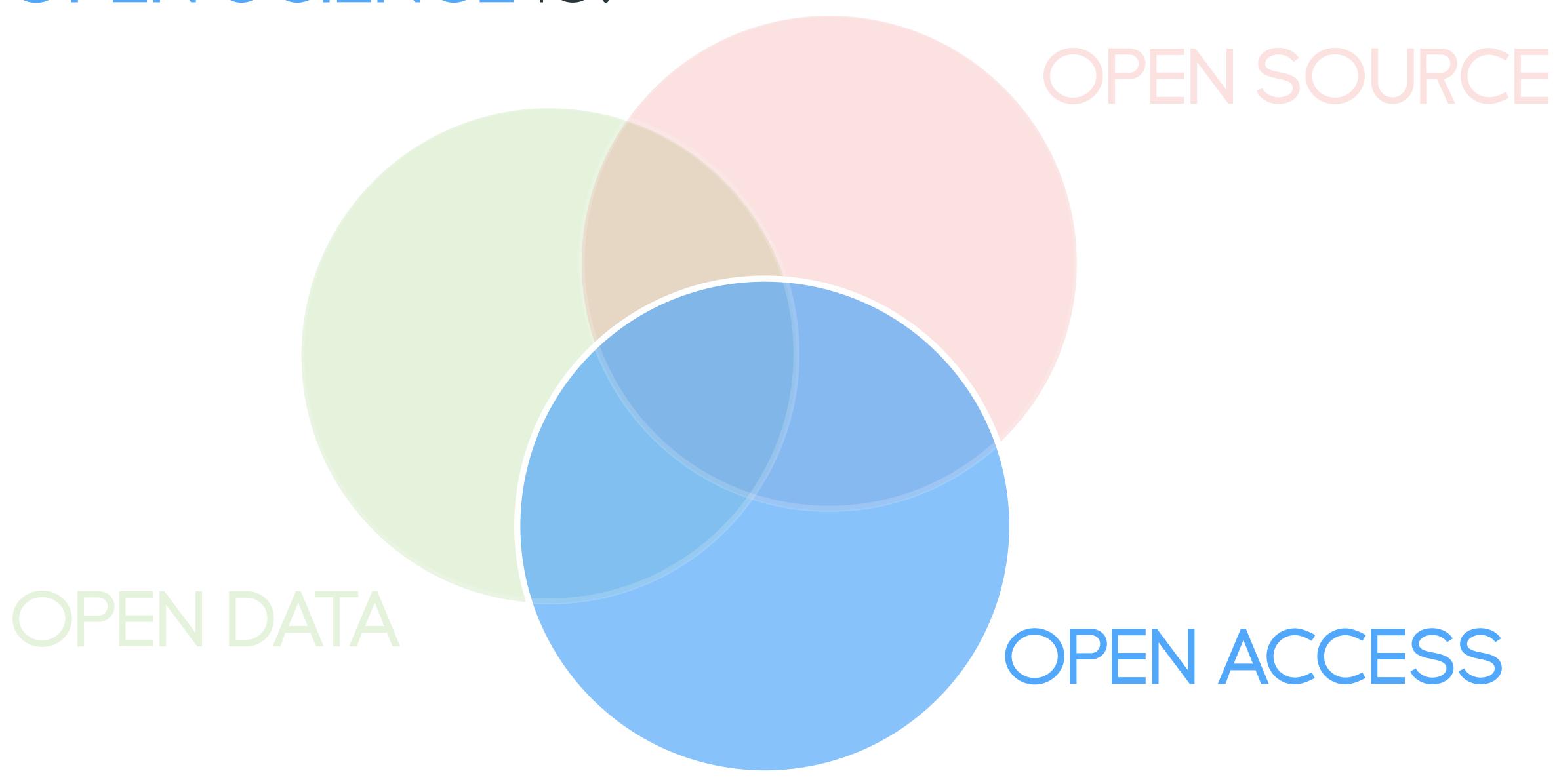




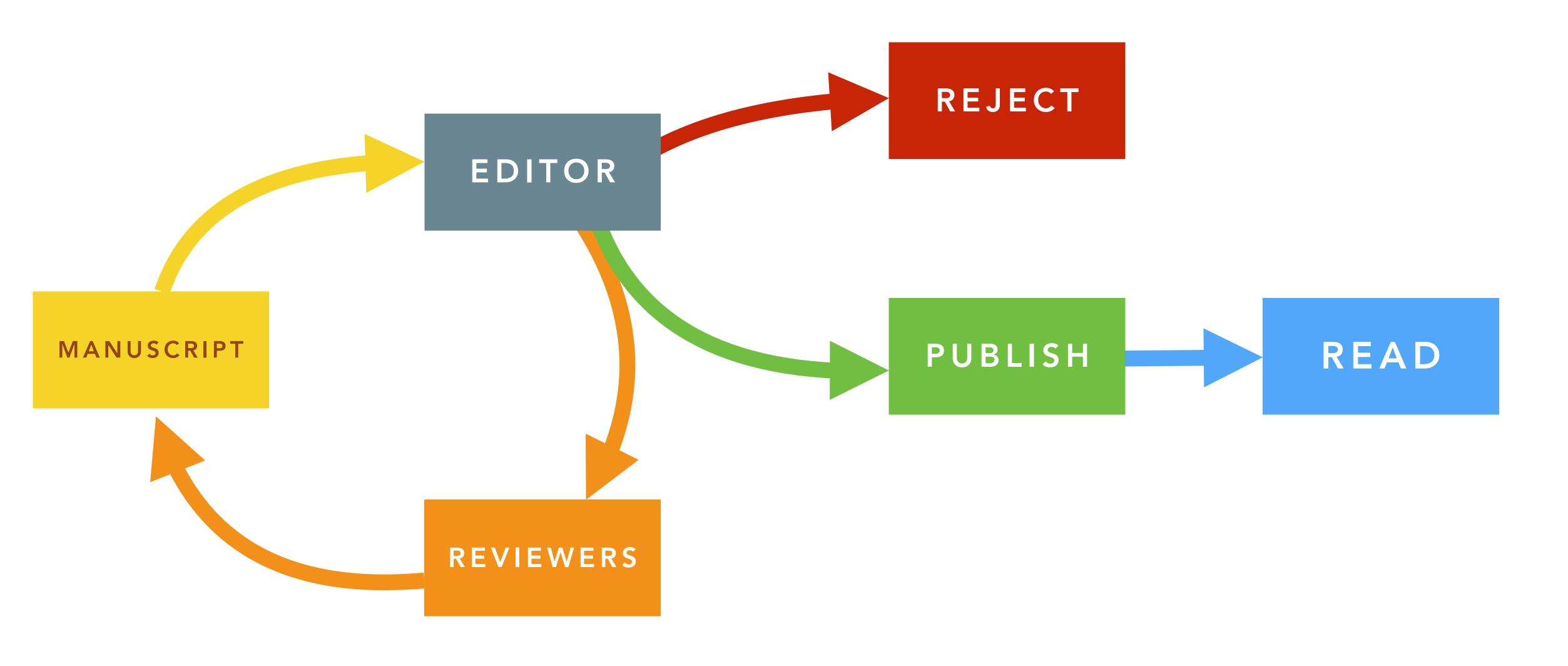
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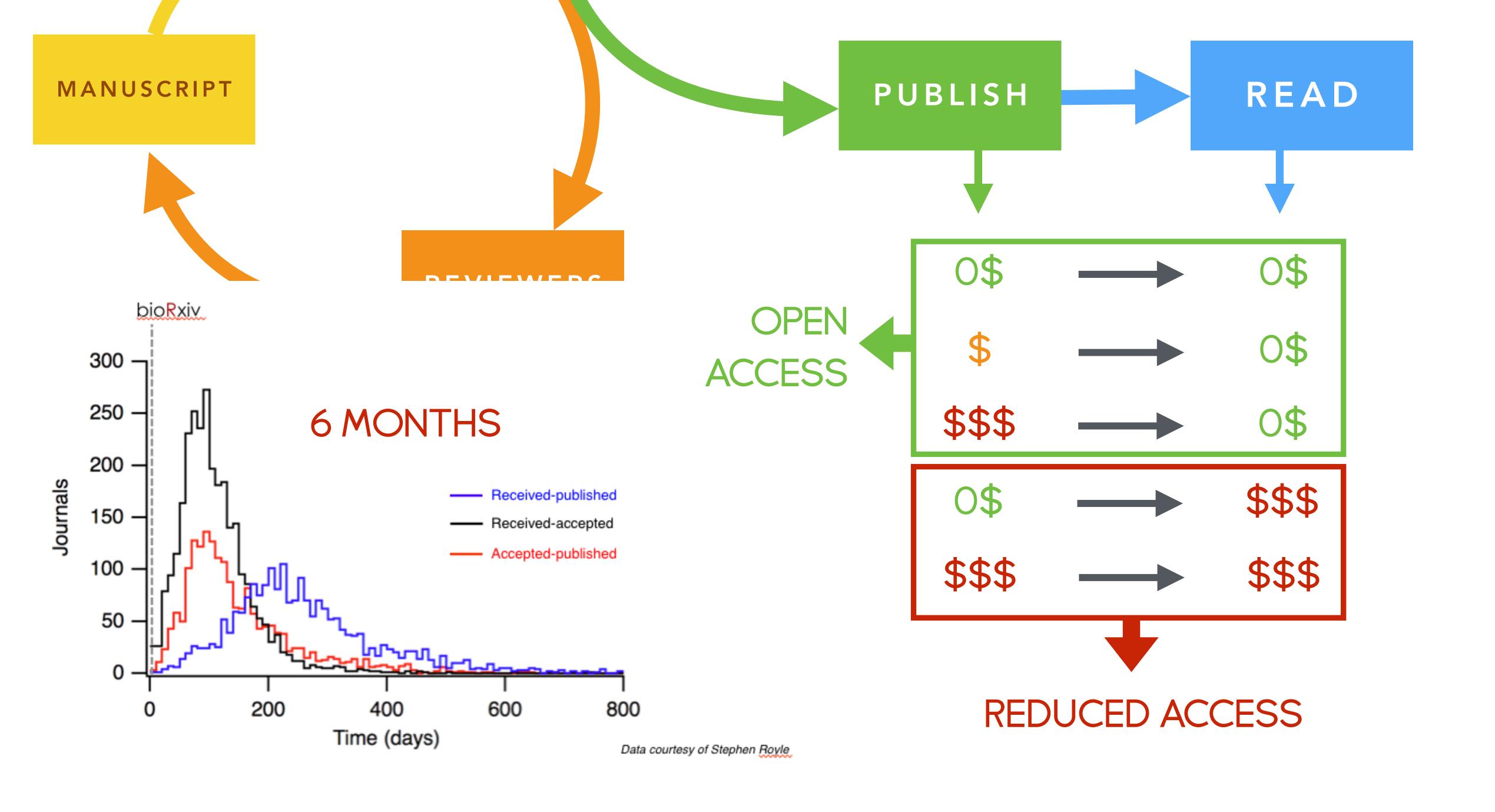


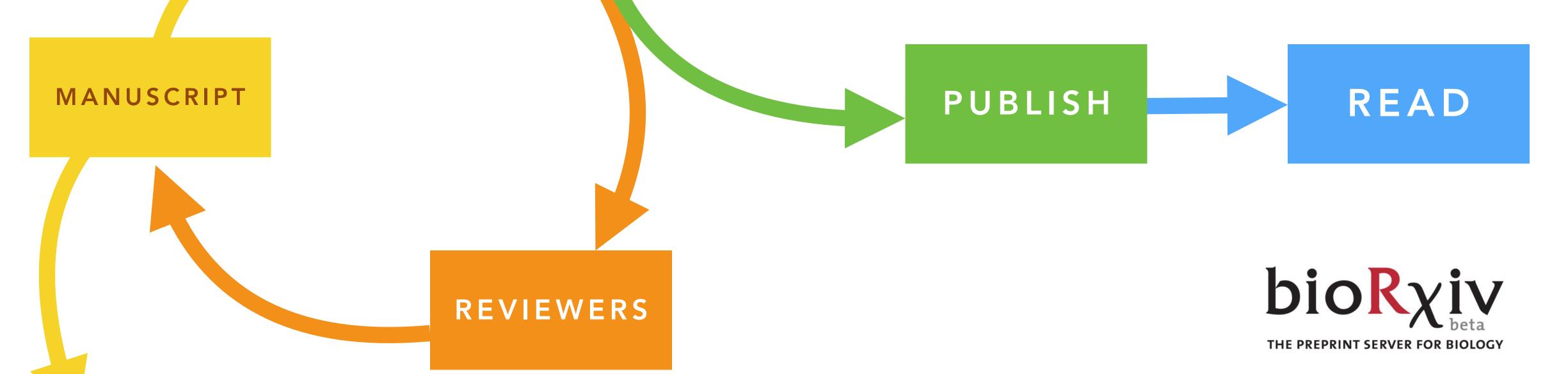
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Tony Pridmore, University of Nottingham, UK

*Correspondence:

Guillaume Lobet g.lobet@fz-juelich.de

[†]These authors have contributed equally to this work.

Specialty section:

This article was submitted to Plant Biophysics and Modeling, a section of the journal Frontiers in Plant Science

Received: 14 September 2016
Accepted: 15 March 2017
Published: 03 April 2017

Citation:

Lobet G, Koevoets IT, Noll M, Meyer PE, Tocquin P, Pagès L and Périlleux C (2017) Using a Structural Root System Model to Evaluate and Improve the Accuracy of Root Image Analysis Pipelines. Front. Plant Sci. 8:447. doi: 10.3389/fpls.2017.00447 analyzea. Our study on a synthetic librar our analysis is a cathorough calibration arise, especially for the image library and the community.

Keywords: image analysis

INTRODUCTIO

Roots are of utmost represents great proming Koevoets et al., 2016 quantification is usual either using classic imagiluorescence,...). The noot system.

To paraphrase the system." **Figure 1A** is is indeed a two-dime





New Results

Using a structural root system model to evaluate and improve accuracy of root image analysis pipelines.

© Guillaume Lobet, © Iko Koevoets, Manuel Noll, Patrick E Meyer, © Pierre Tocquin, Loic Pa

doi: https://doi.org/10.1101/074922

This article is a preprint and has not been peer-reviewed [what does this mean?].

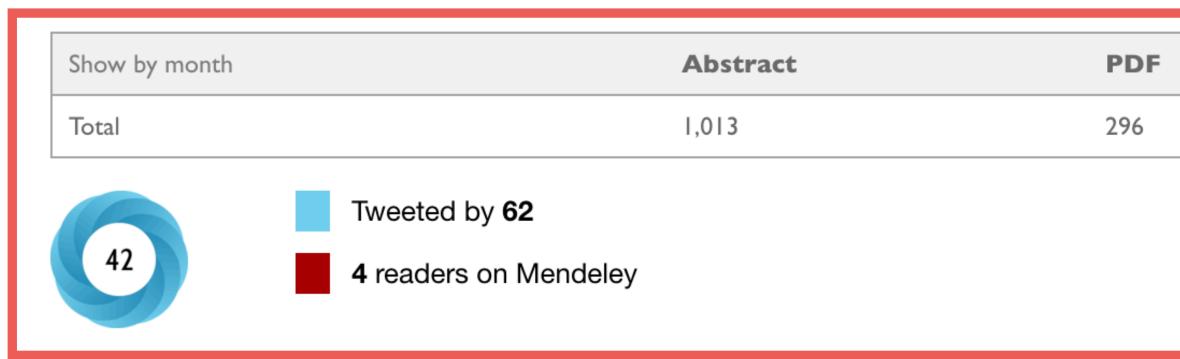
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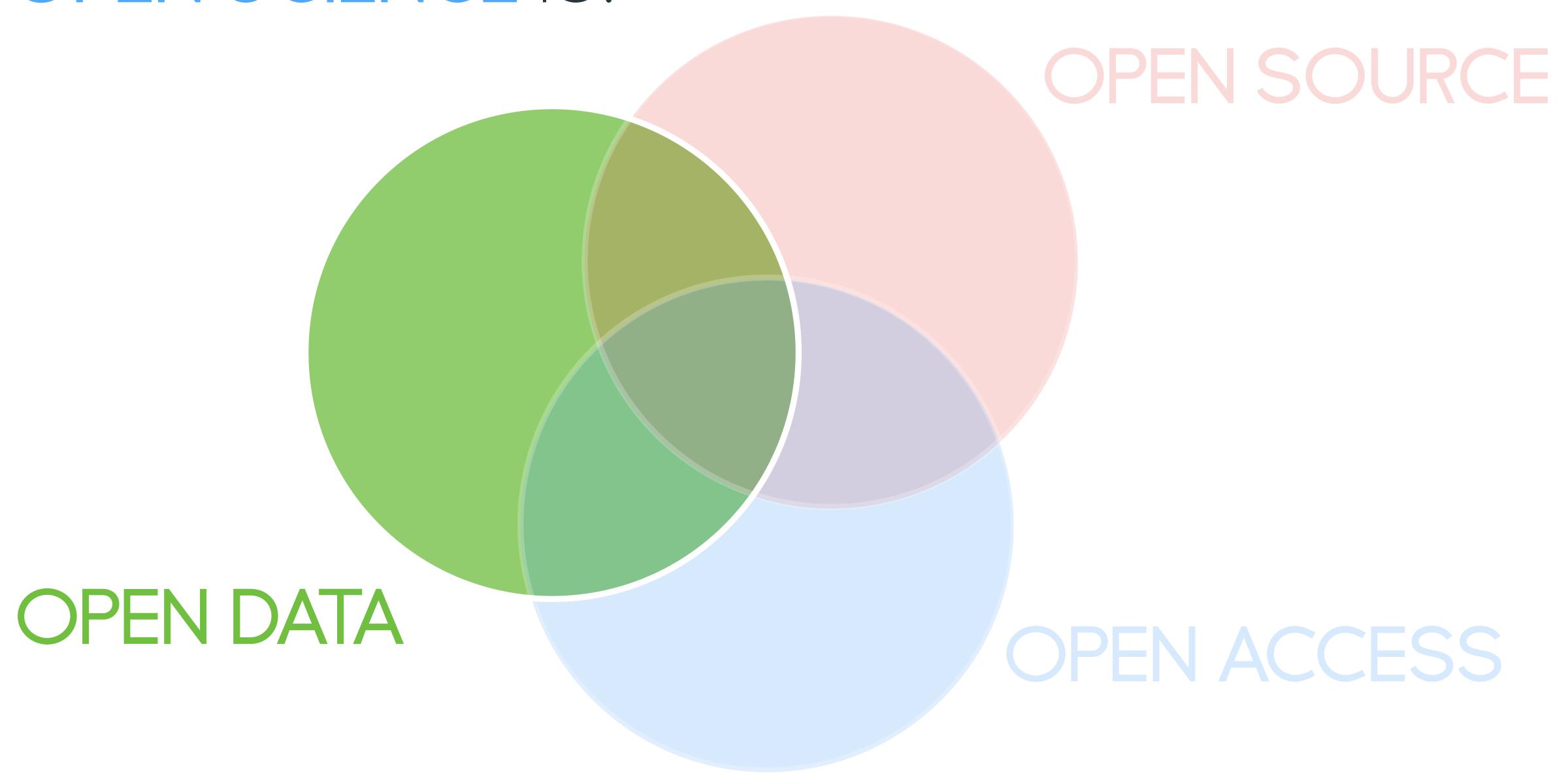
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Open Science: A view from the Bench

Guillaume Lobet

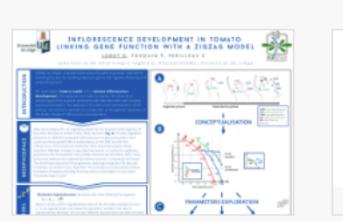
29/02/2016



Structural Root Modelling

Guillaume Lobet

11/11/2015

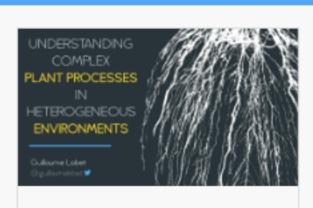


Inflorescence development in tomato: linking gene function with ...

Guillaume Lobet v

Water relations in the soil-plant system: what can we learn from fun...

27/01/2015



Research Project UCL-FZJ

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Water flow in the soil-plant domain. New tools and methods

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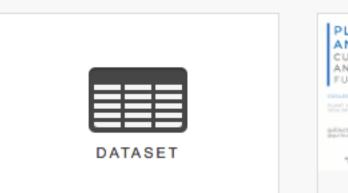
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Science Valorisation

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Maize root emergence

WATER RELATIONS IN THE

WHAT CAN'WE LEARN FROM

🏬 🚜 fnfs 🔤 🛣

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SOIL-PLANT SYSTEM

PLANT MODELS

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12/05/2015



Plant image analysis tools: current trends and future challenges

Guillaume Lobet v

15/04/2015



Introducing Root System Markup Language, a new toolbox to link ex... 15/04/2015

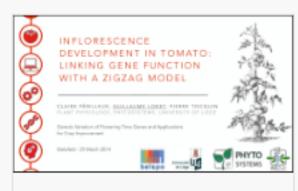
Guillaume Lobet



Modelling water relations in the soil-plant-atmosphere system

Guillaume Lobet 03/12/2014

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FIGSHARE



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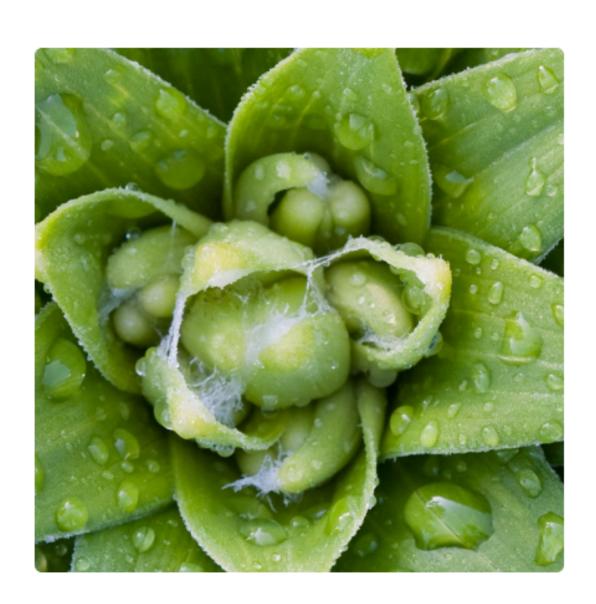


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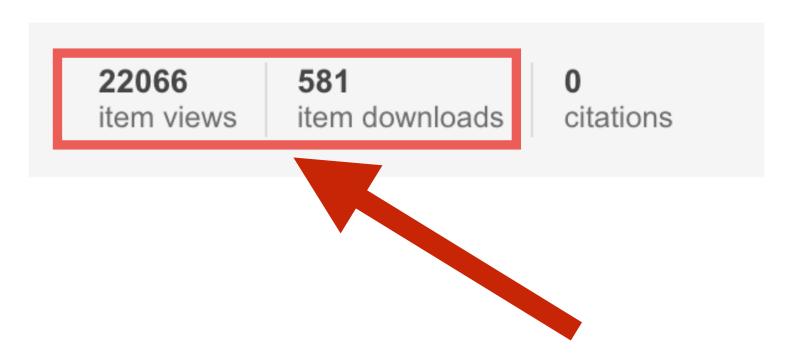


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Plant Illustrations





The aim of this profile is to collect in one place illustrations and pictures of plants, roots, shoots, inflorescences, ... The ultimate goal is to be a resource for the plant science community. If you want to contribute, read our "README" file below:) ----- This account is curated by Erin Sparks, Guillaume Lobet,

SHARE ALL YOUR DATA

Data from: Male-female coevolution in the wild: evidence from a time series in Artemia franciscana



Files in this package

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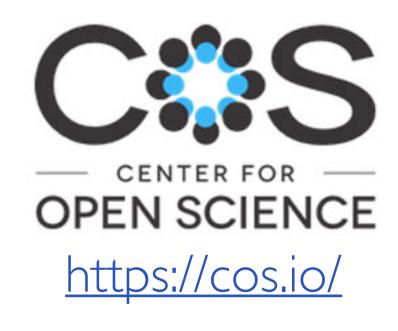
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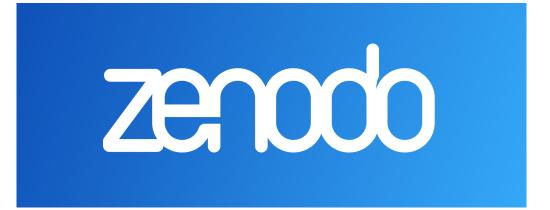
Rode NO, Charmantier A, Lenormand T (2011) Data from: Male-female coevolution in the wild: evidence from a time series in Artemia franciscana. Dryad Digital Repository. doi:10.5061/dryad.56k55

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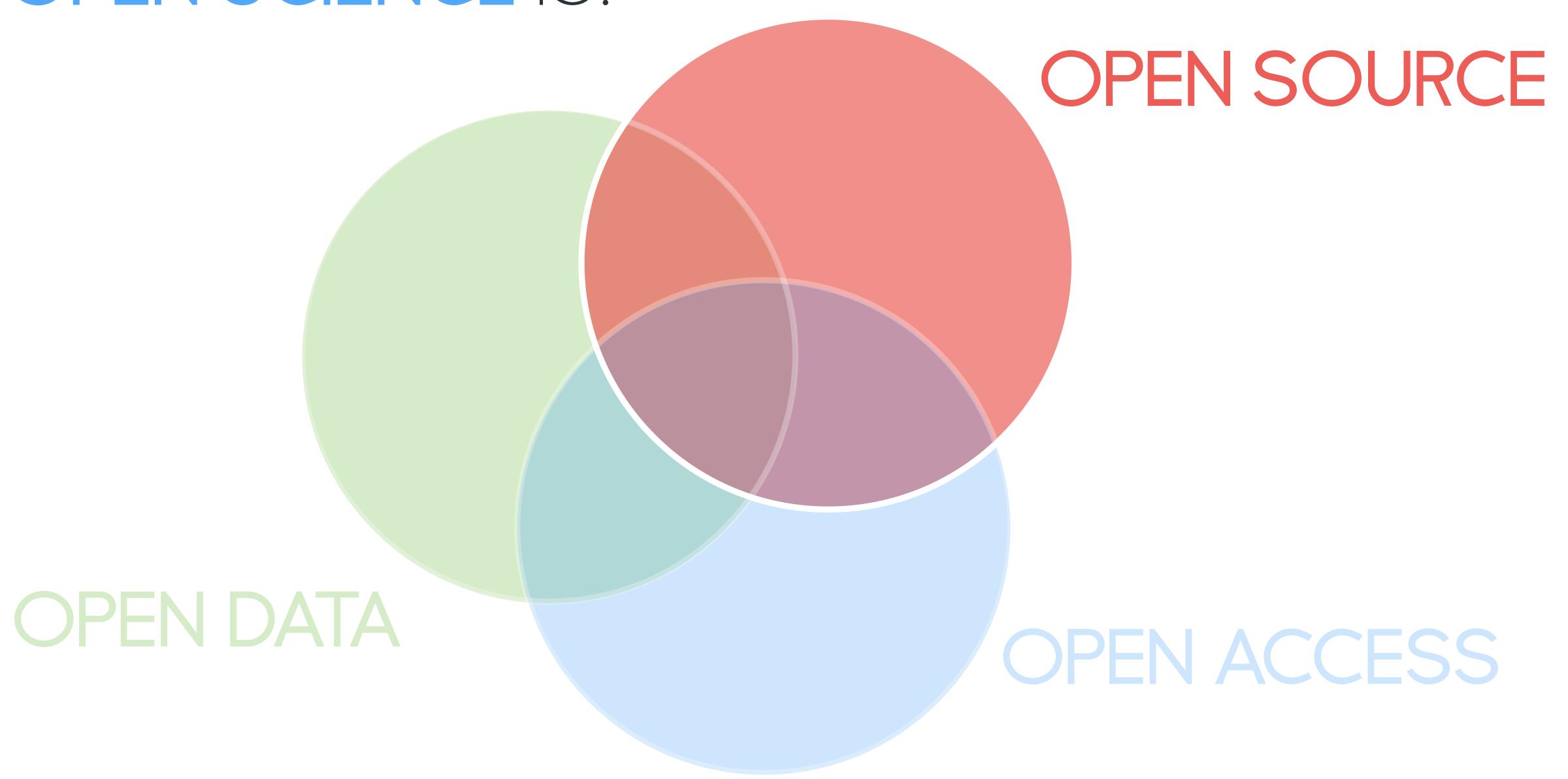
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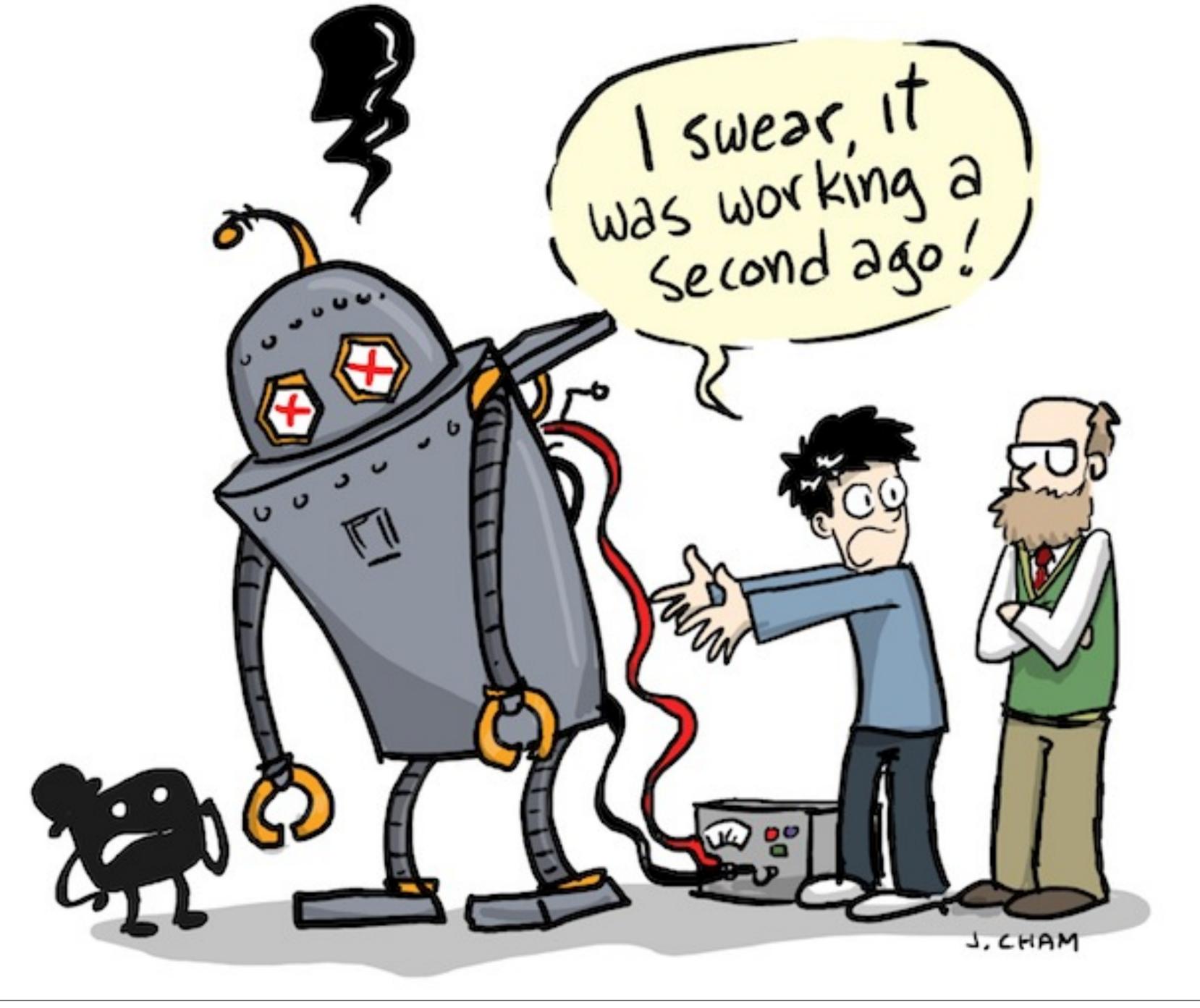


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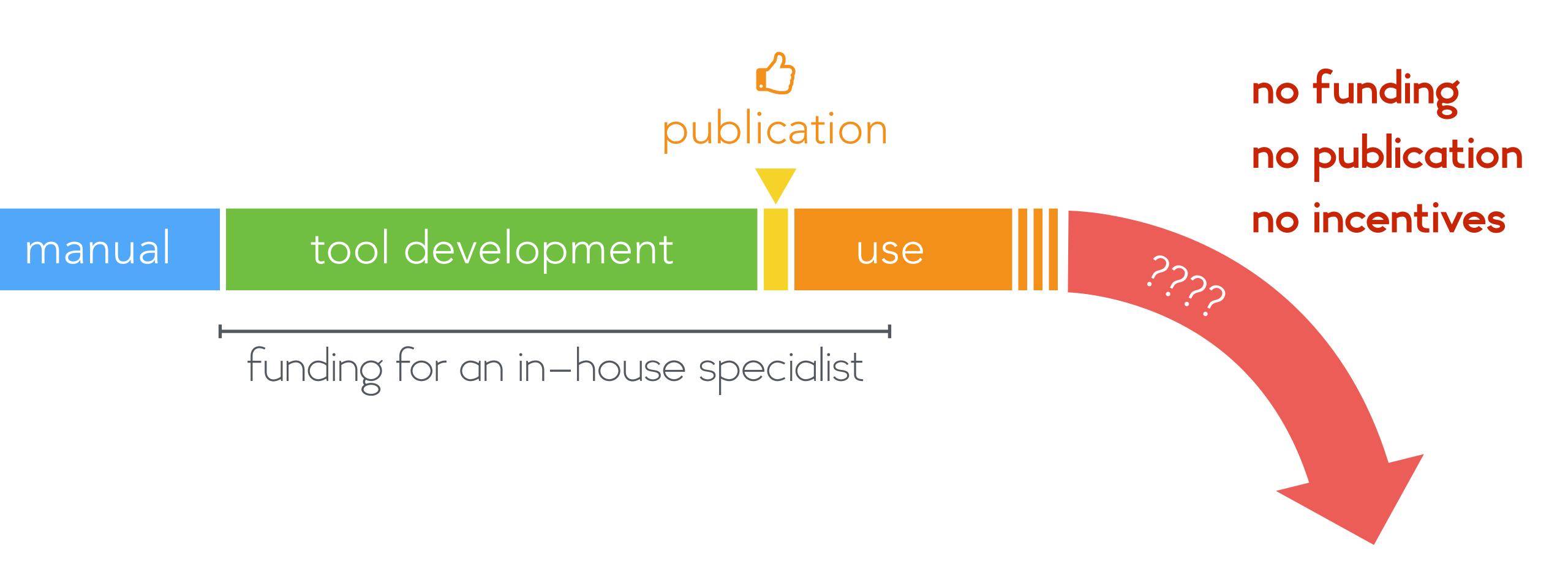


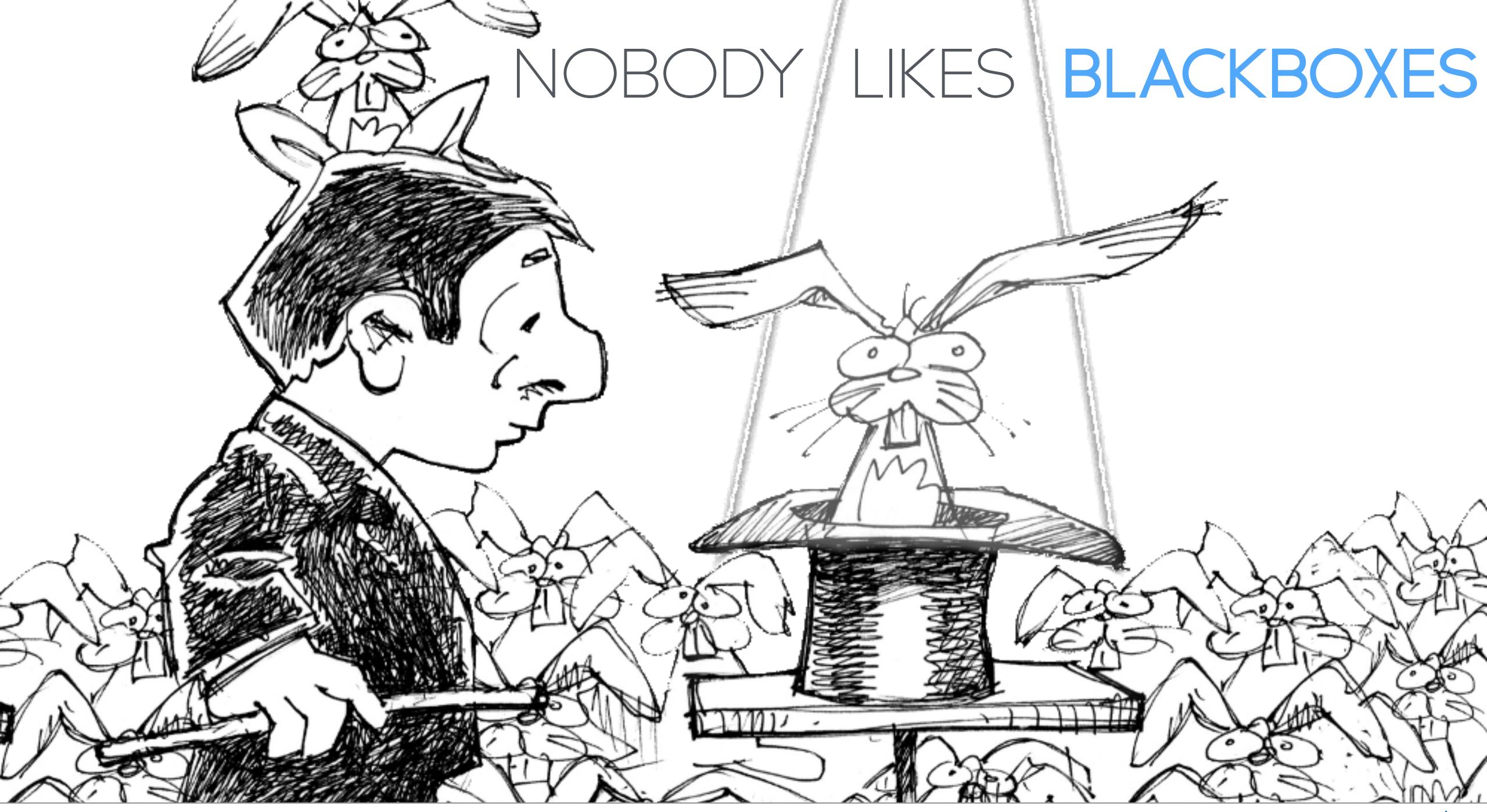
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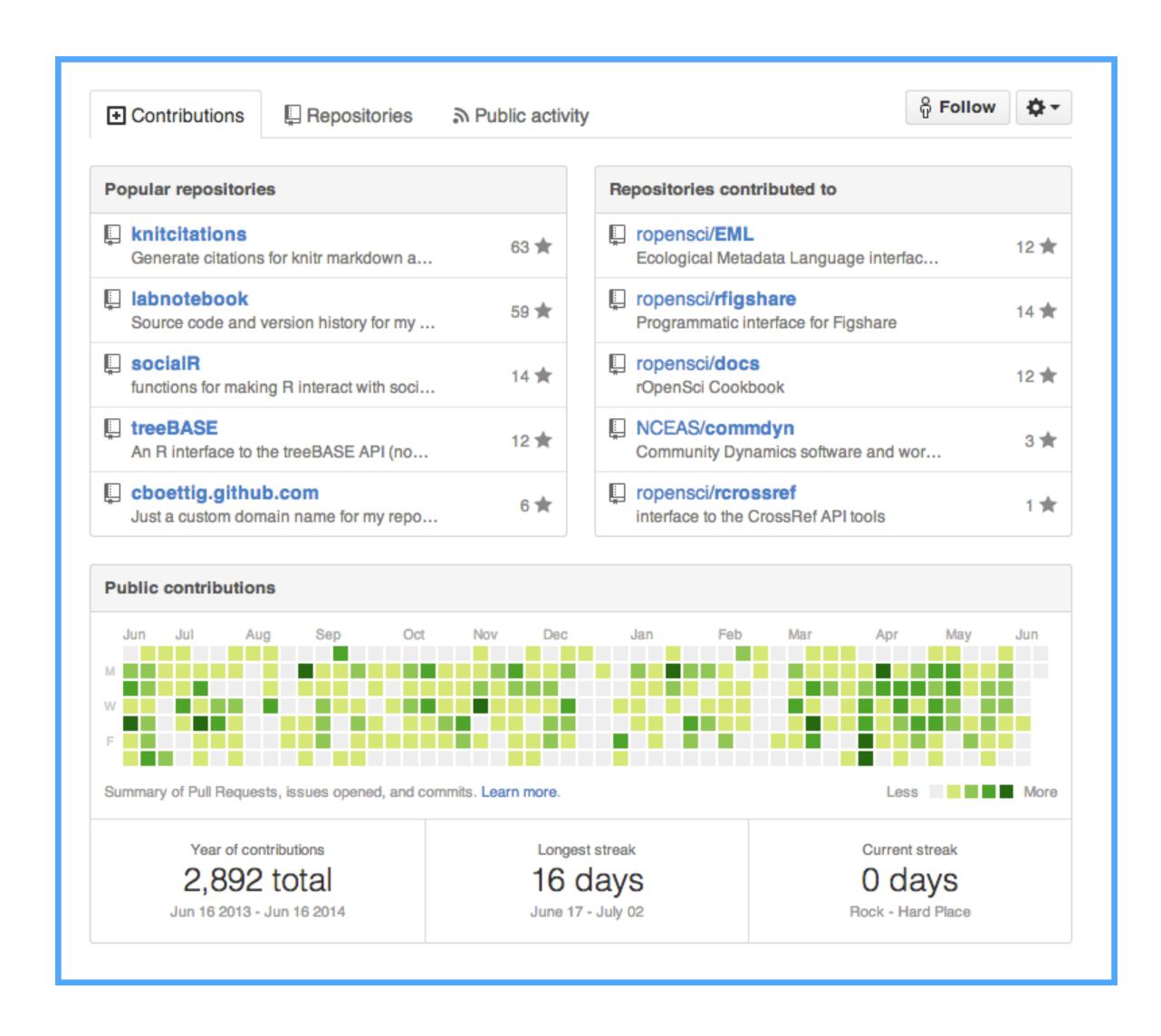


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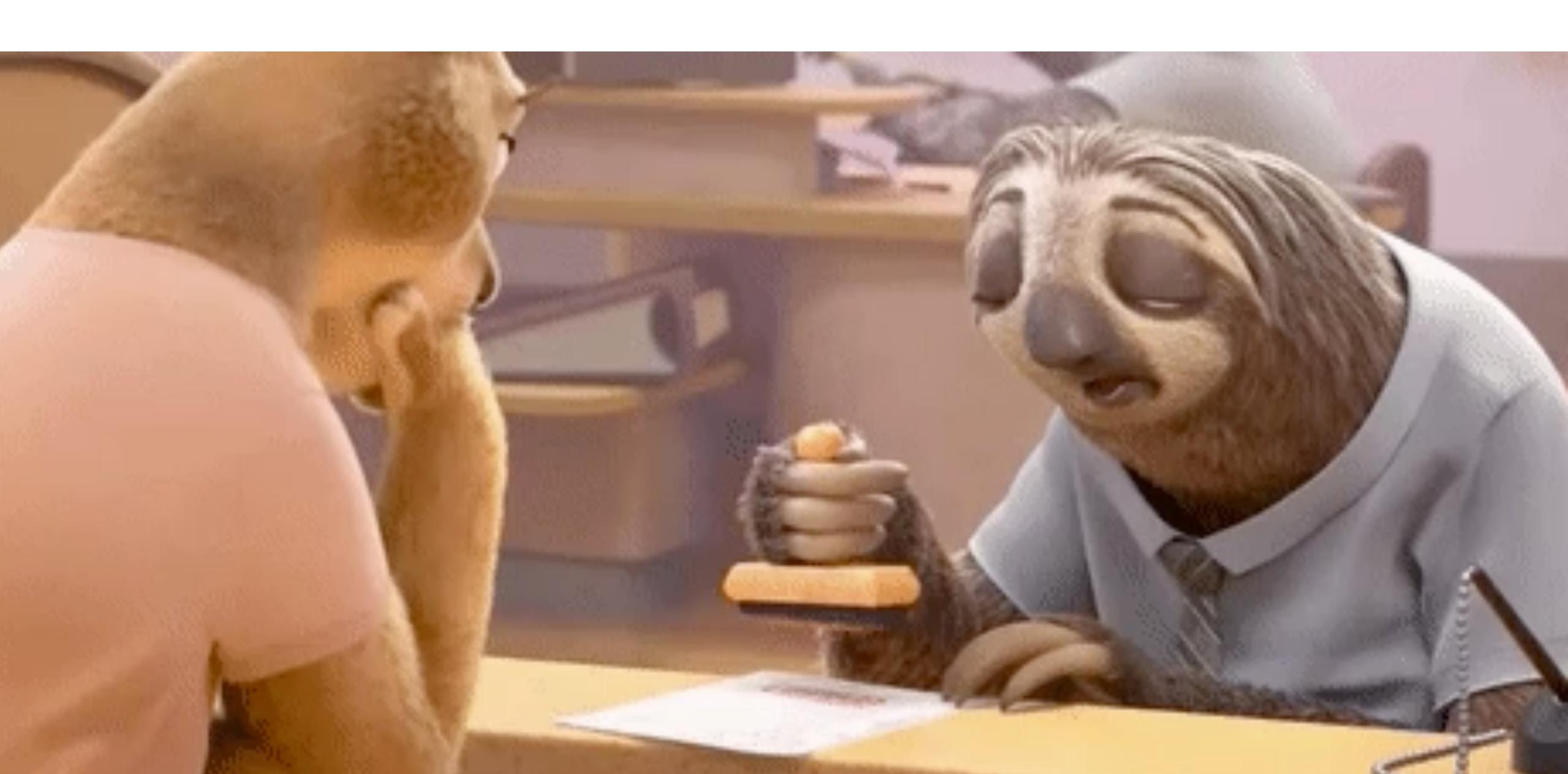
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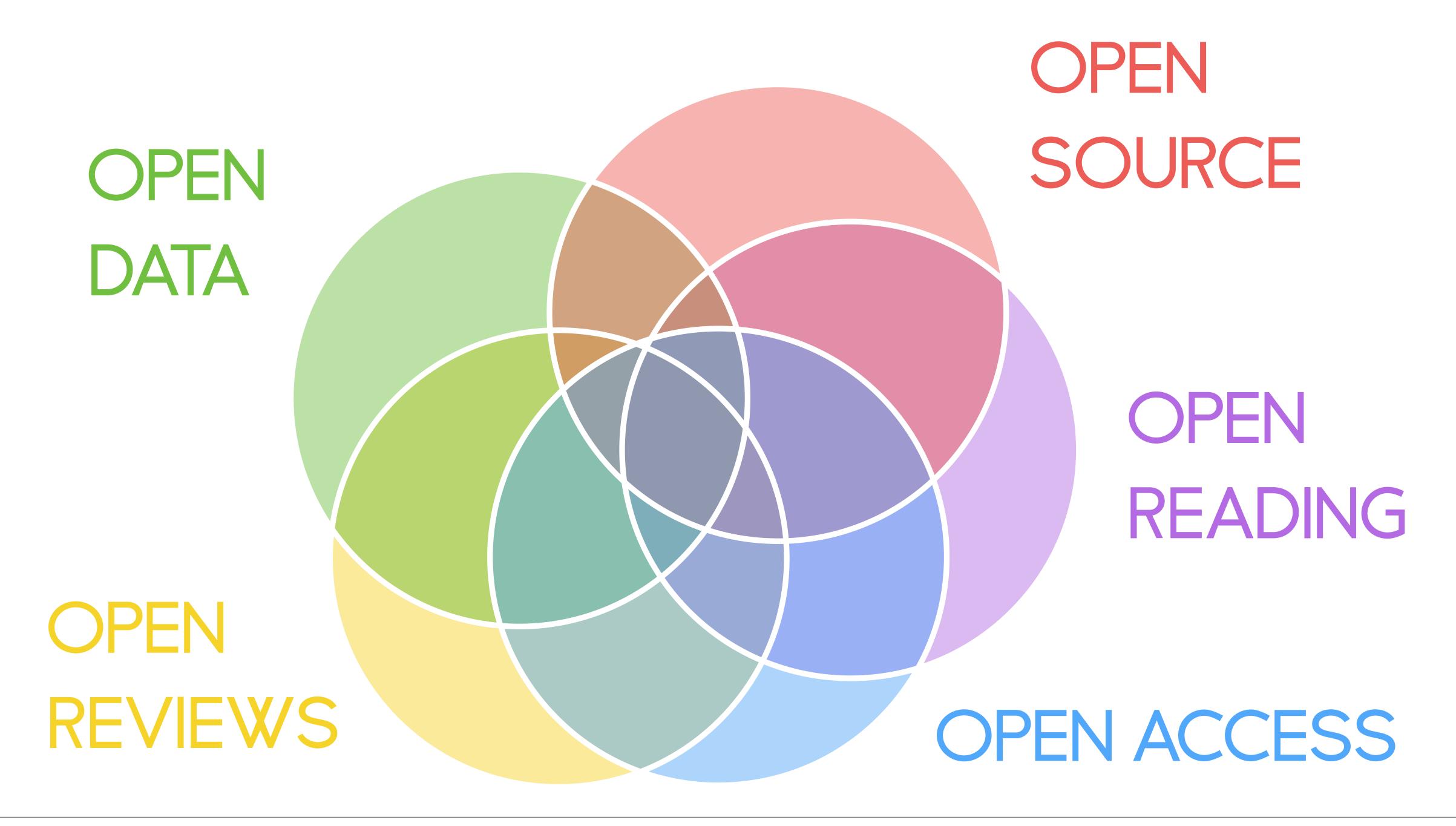
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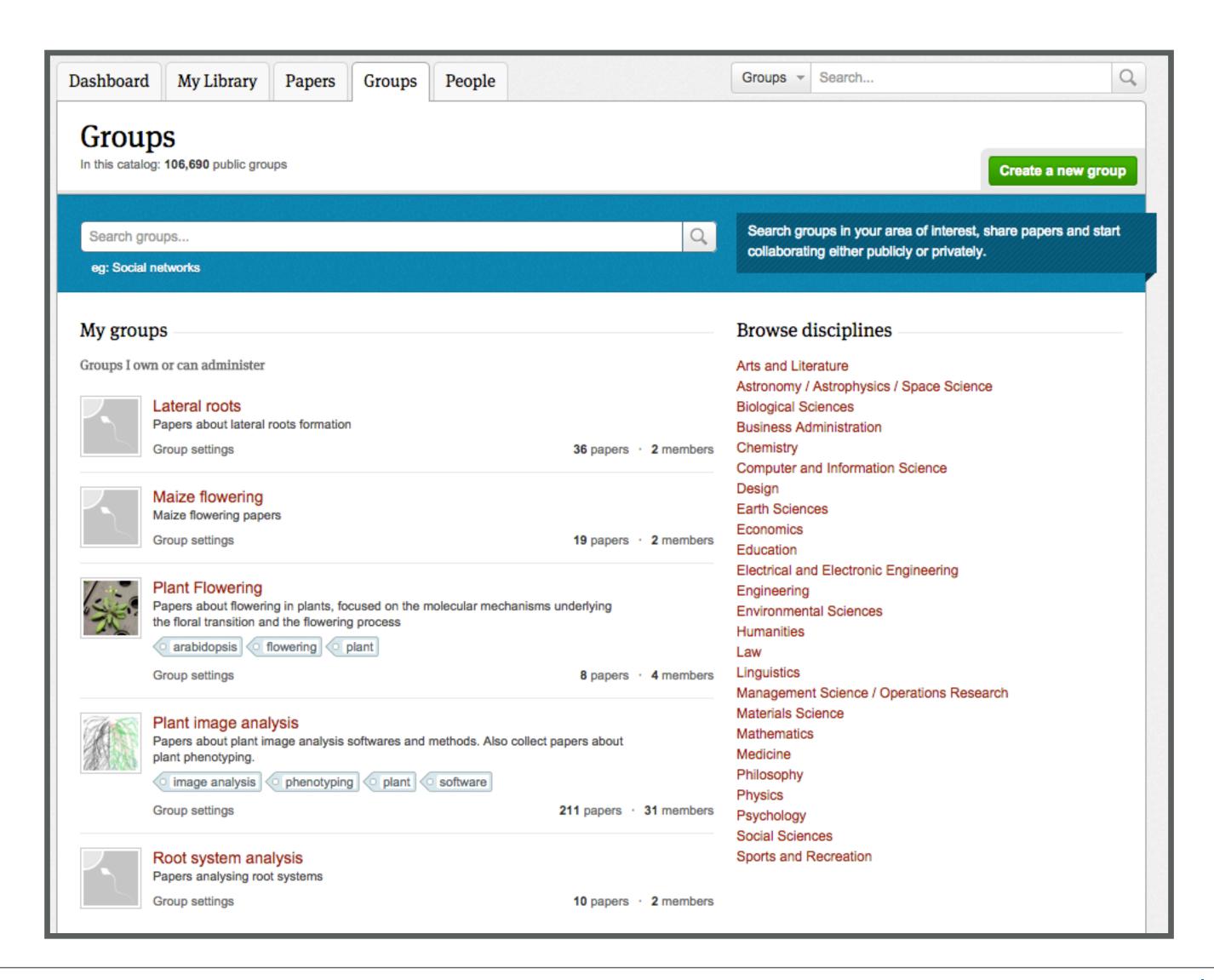




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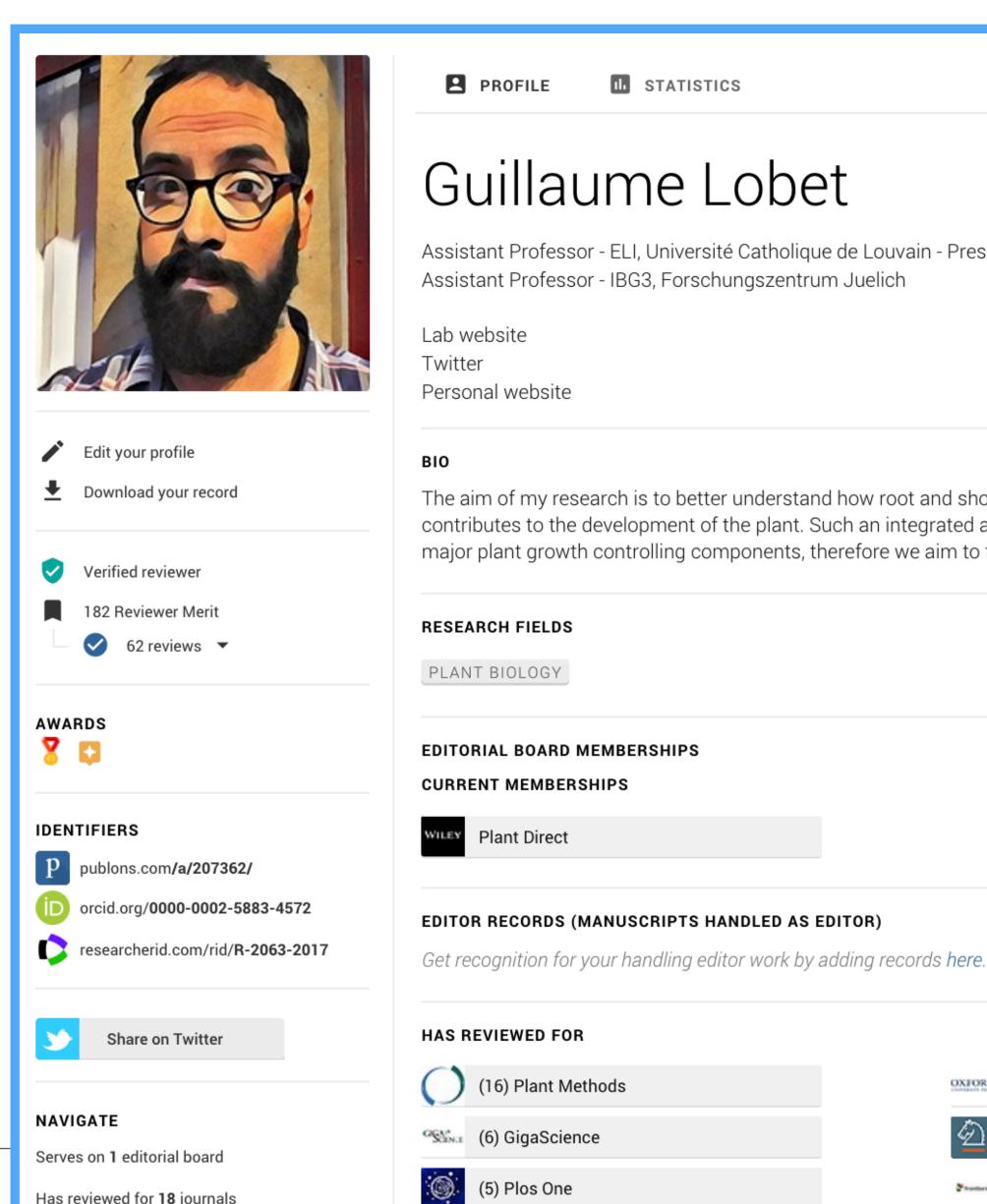




SHARE ALL YOUR REVIEWS

(7) Journal of Experimental Botany

(5) Plant and Soil



PROFILE **III** STATISTICS Guillaume Lobet Assistant Professor - ELI, Université Catholique de Louvain - Present Assistant Professor - IBG3, Forschungszentrum Juelich Lab website Twitter Personal website BIO The aim of my research is to better understand how root and shoot influence each other and how this interaction contributes to the development of the plant. Such an integrated approach represents a realistic potential to identify major plant growth controlling components, therefore we aim to transfer this knowledge to the crop species maize. RESEARCH FIELDS PLANT BIOLOGY **EDITORIAL BOARD MEMBERSHIPS CURRENT MEMBERSHIPS** Plant Direct

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(16) Plant Methods





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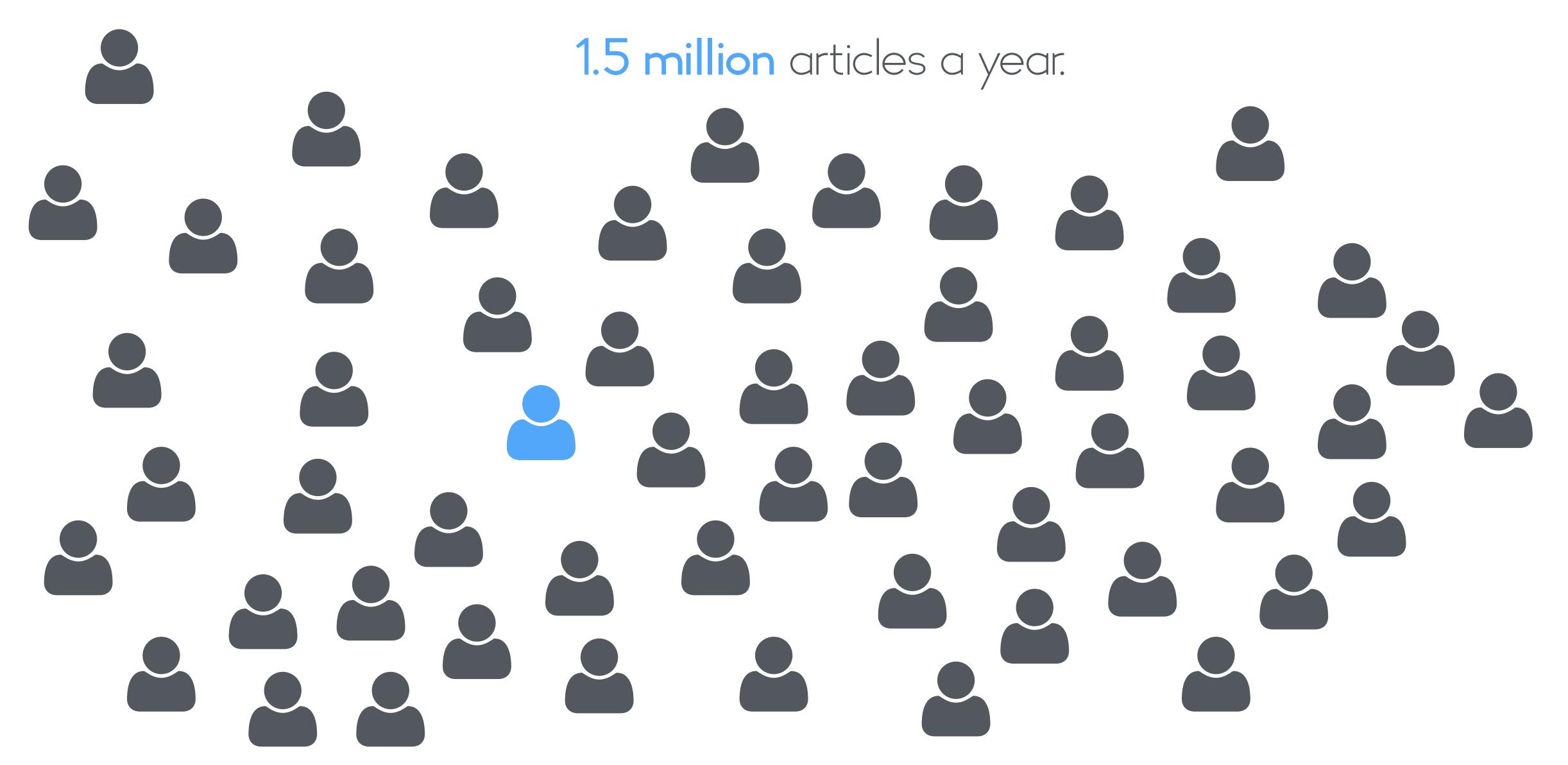
SCIENTIFIC PROFILE





Illustration from MatthewRHumphreys 43

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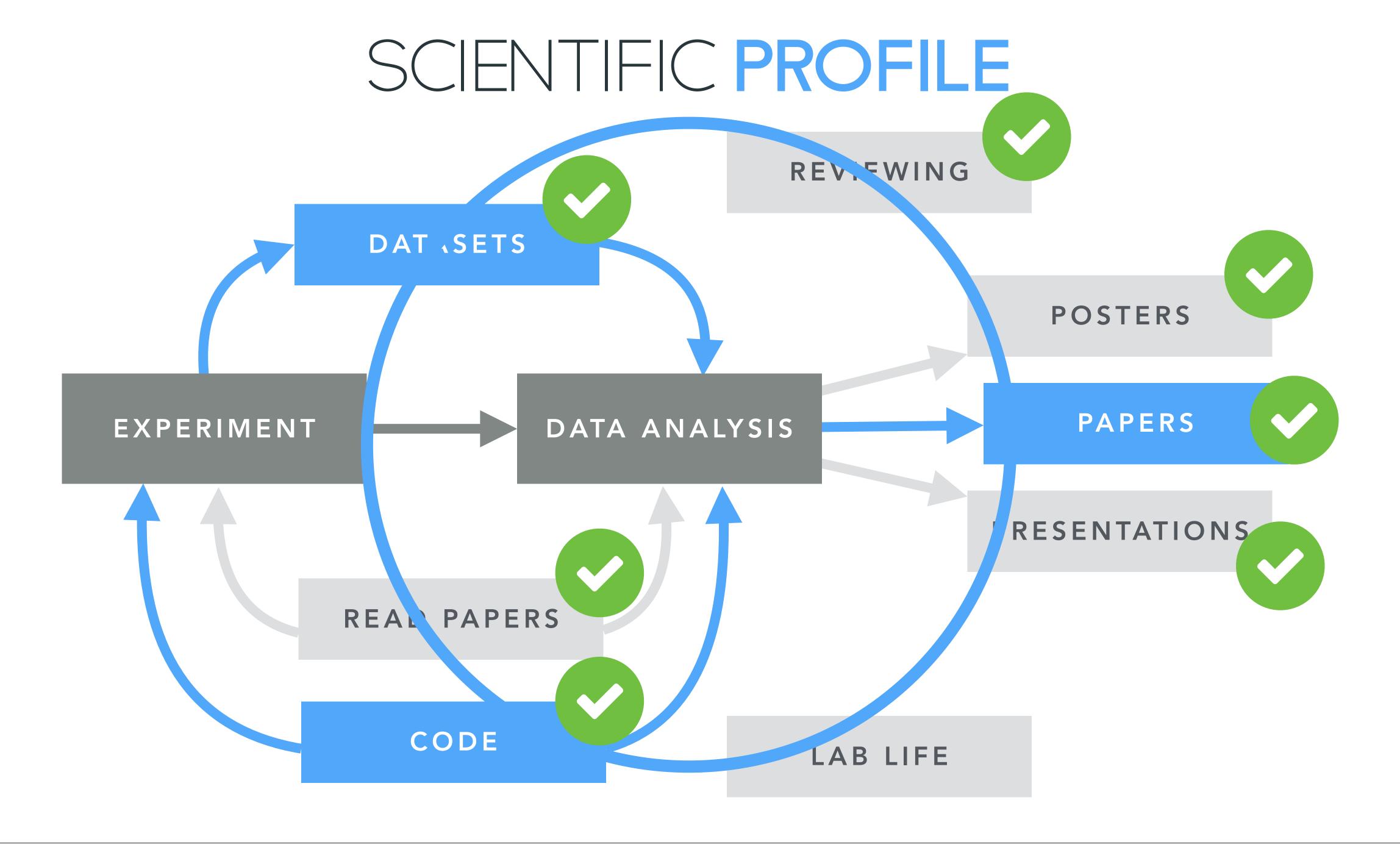
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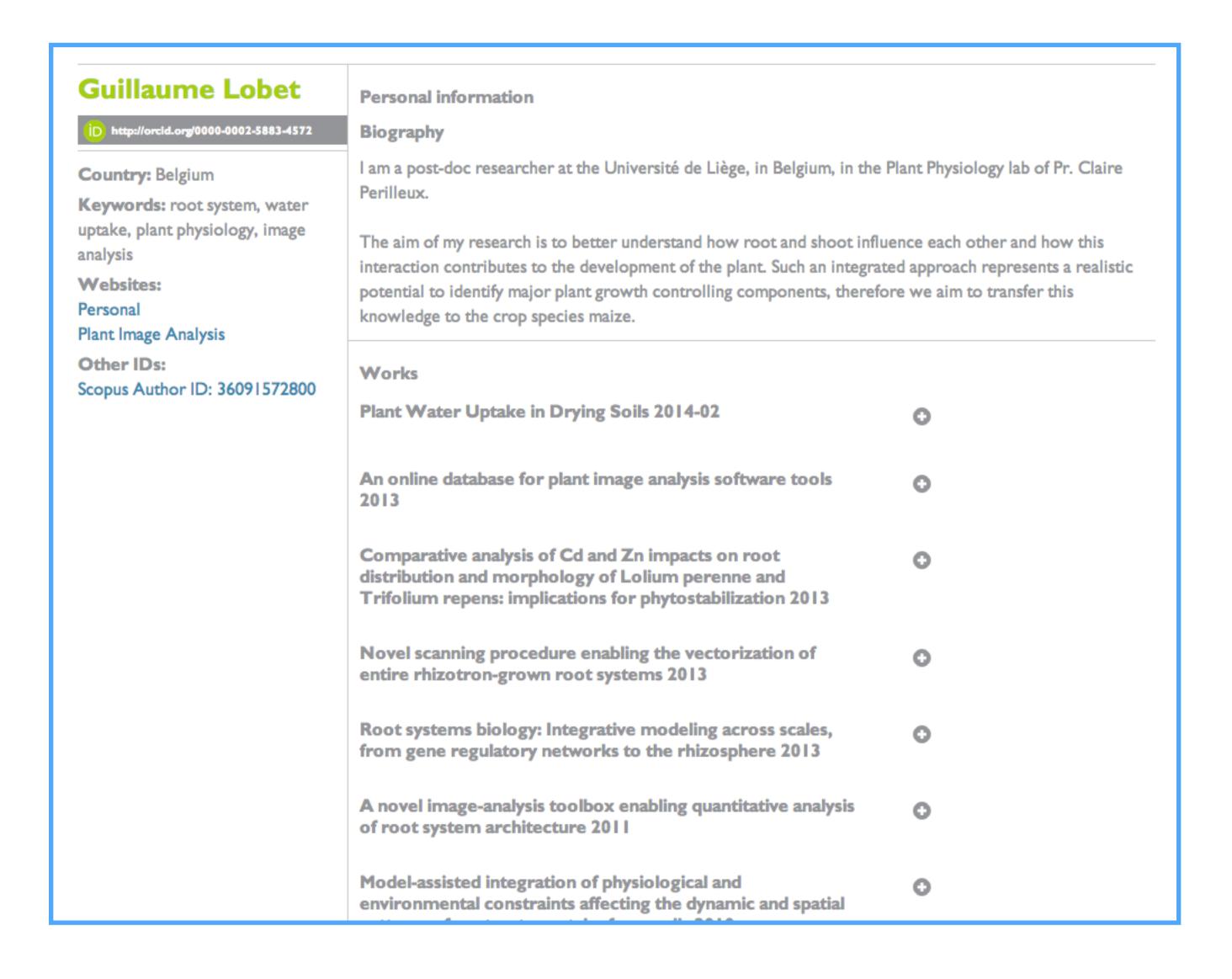
FOR SCIENTISTS



GET A UNIQUE IDENTIFIER WITH ORCID

- Avoid confusion between similar names (J. Smith or J. Wang)
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CREATEA PROFILEON IMPACTSTORY

- Gather data from ORCID and add altmetrics on top





Guillaume Lobet y

Forschungszentrum Jülich Assistant Professor

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GLO-Roots: an imaging platform enabling multidimensional characterization of soil-grown root systems

2015 Elife

229 🔝 🖺 👭 🕮 💆

Model-assisted integration of physiological and environmental constraints affecting the dynamic and spatial patterns of root water uptake from soils 2010 Journal of Experimental Botany

120 **

A novel image-analysis toolbox enabling quantitative analysis of root system architecture

2011 Plant Physiology

116 **

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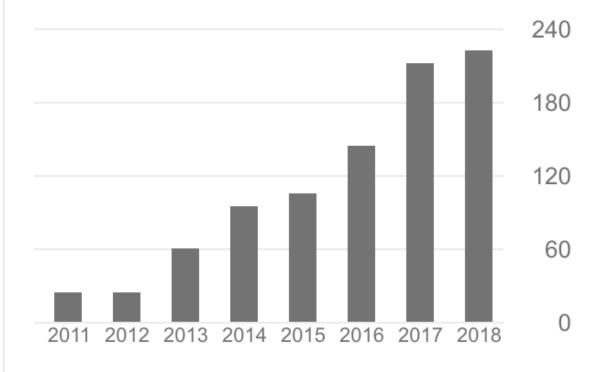
Y FOLLOWING

Assistant Professor, Forschungszentrum Jülich & Université catholique de Louvain Verified email at fz-juelich.de - Homepage root system image analysis modelling

TITLE	#	•		CITED BY	YEAR
G Lobet,	L Pagès, >	analysis to X Draye 67 (1), 29-39		e 210	2011
dynami	ic and sp	atial patte	n of physiological and environmental constraints affecting the erns of root water uptake from soilsX Draye, Y Kim, G Lobet, M Javau 61 (8), 2145-2155	132 X Paperpile	2010
	ne databath		ant image analysis software toolsG Lobet, X Draye, C Périlleux 🔽 Pa	aperpile 🚹 110	2013
	stemsR R	• • • •	olatform enabling multidimensional characterization of soil-grownez, G Lobet, H Lindner, PL Pradier, J Sebastian, MC Yee,		2015
		ake in dryi o. 113.2334	ing soilsG Lobet, V Couvreur, F Meunier, M Javaux, X Draye 🔽 Paperpile 👖 86	5 5	2014
F Bouche	é, G Lobet,	P Tocquin,	database of flowering-time gene networks in <i>Arabidopsis thaliai</i> C Périlleux Paperpile 📳 , D1167-D1171	na 50	2015

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Co-authors					
	Xavier Draye Professeur en génétique et écop…	>			
water-	Mathieu Javaux Université catholique de Louvain	>			
	Loïc Pagès Senior scientist, INRA Centre d'A	>			

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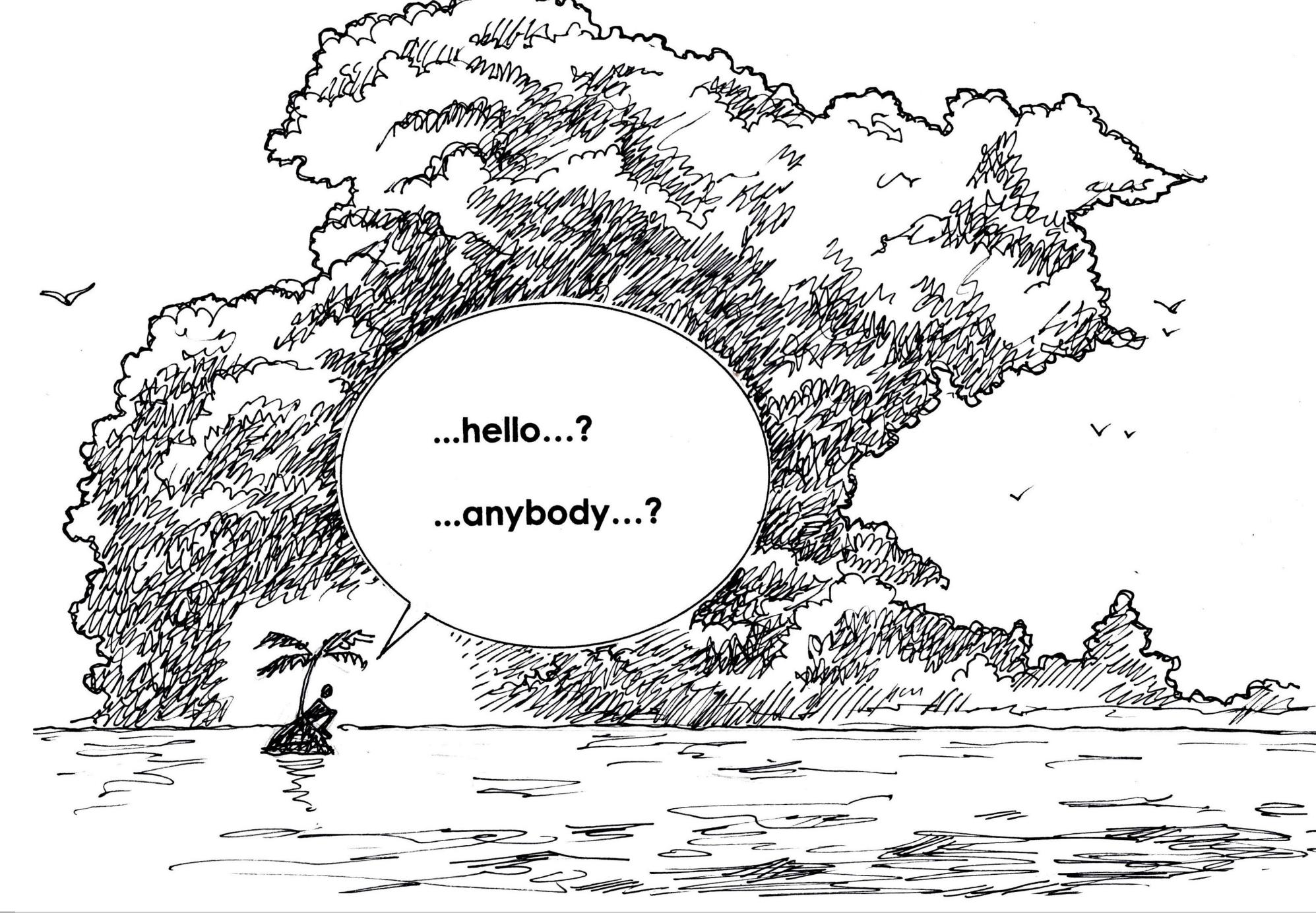








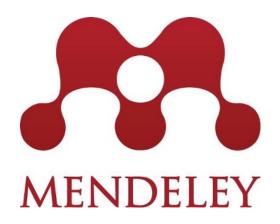




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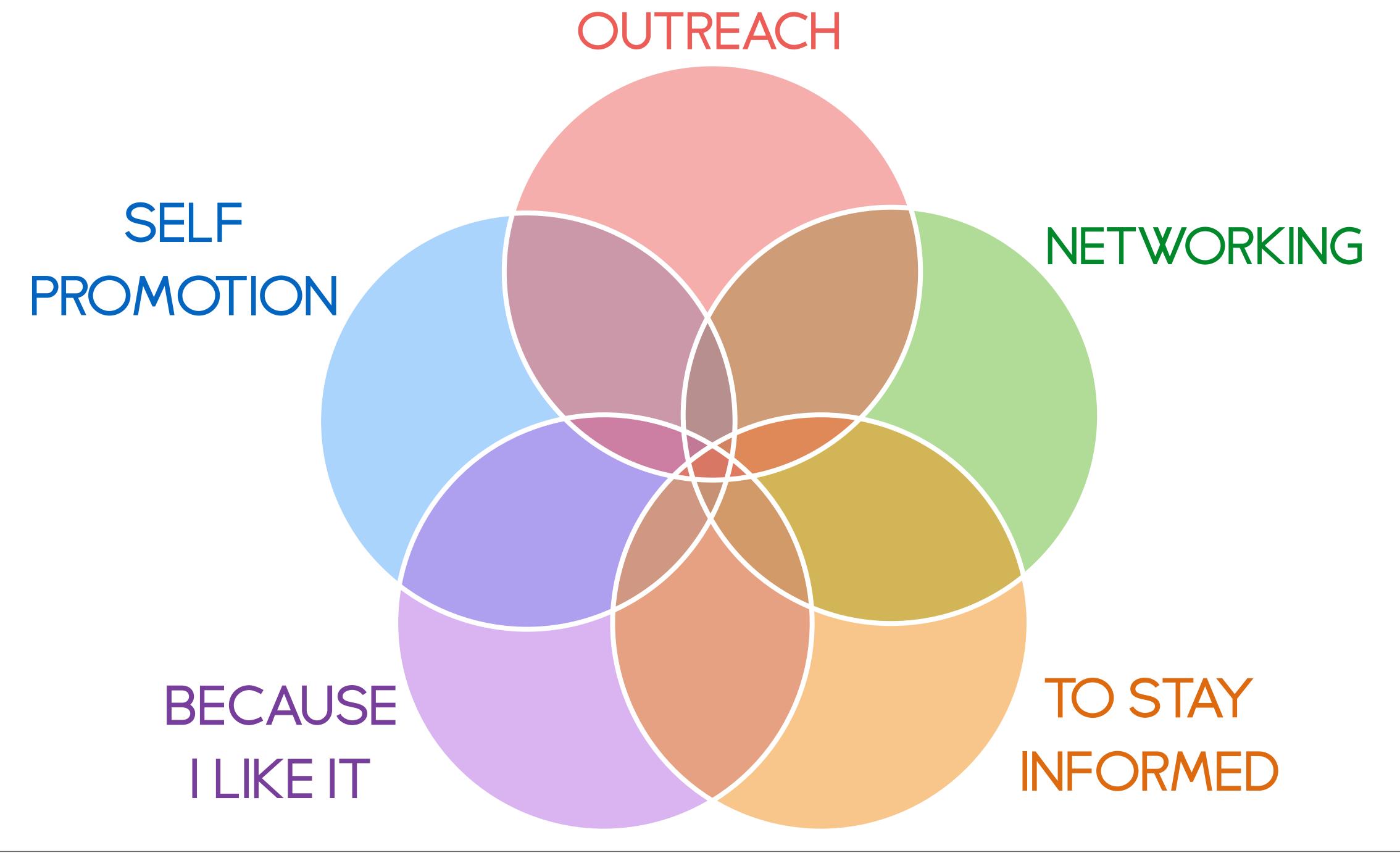
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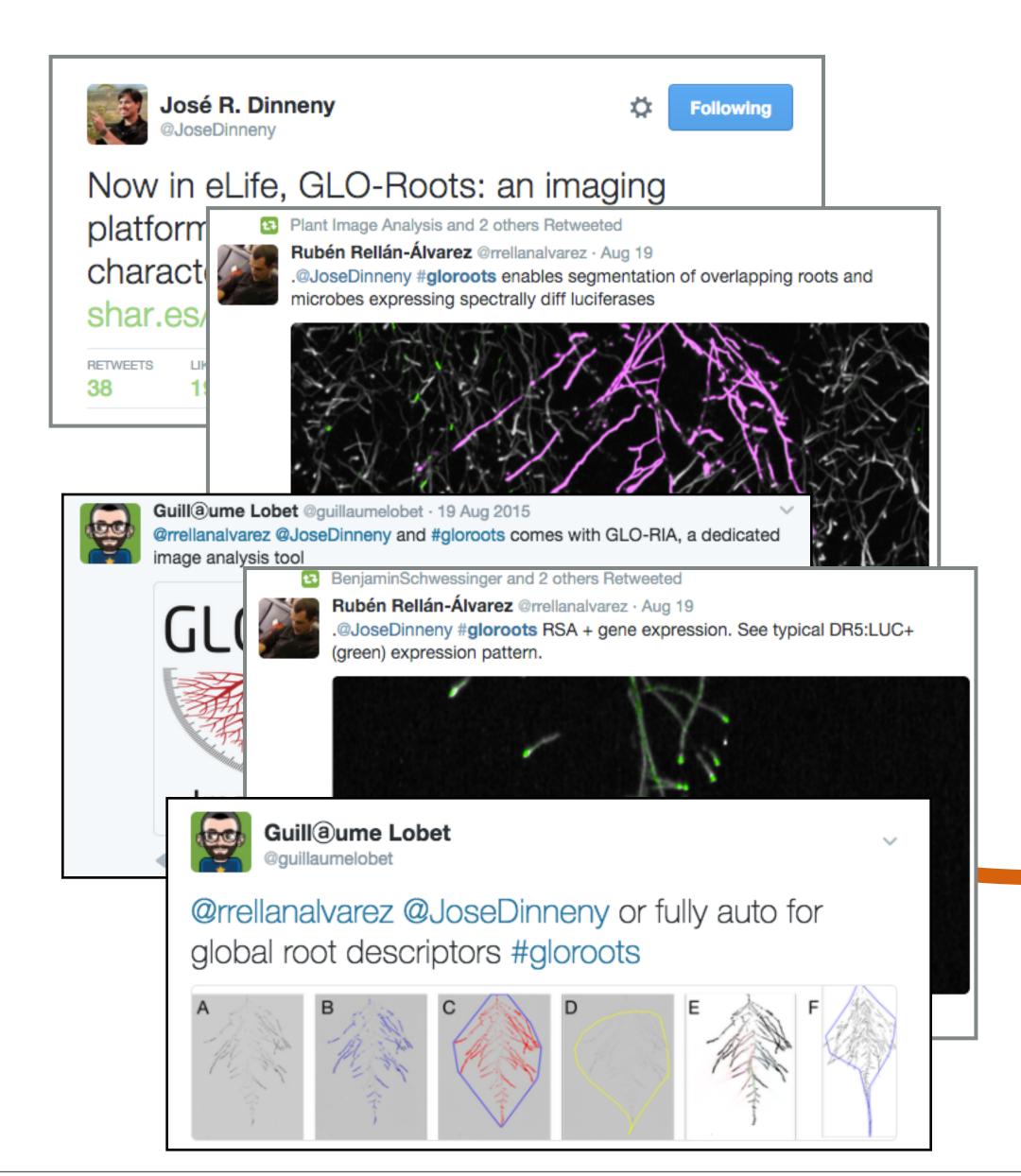


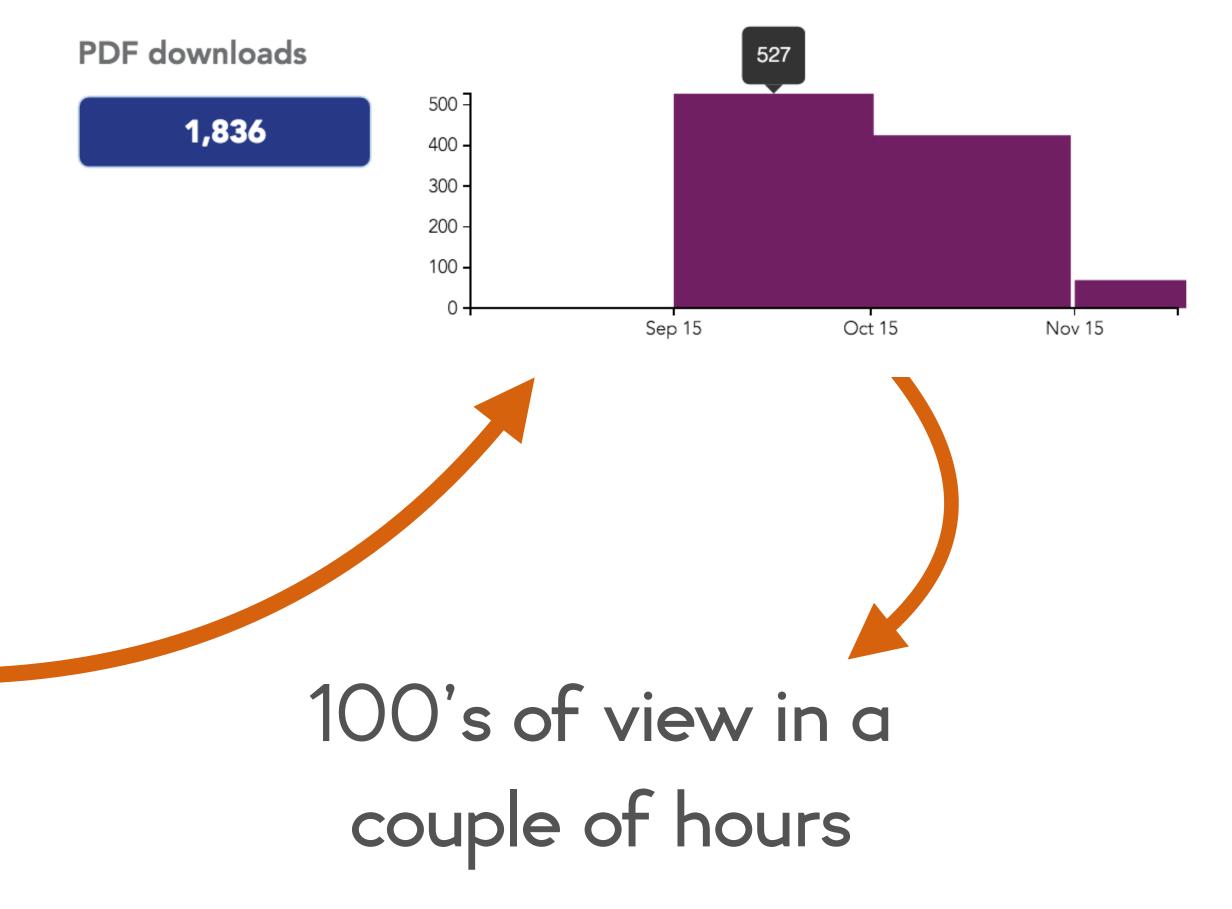
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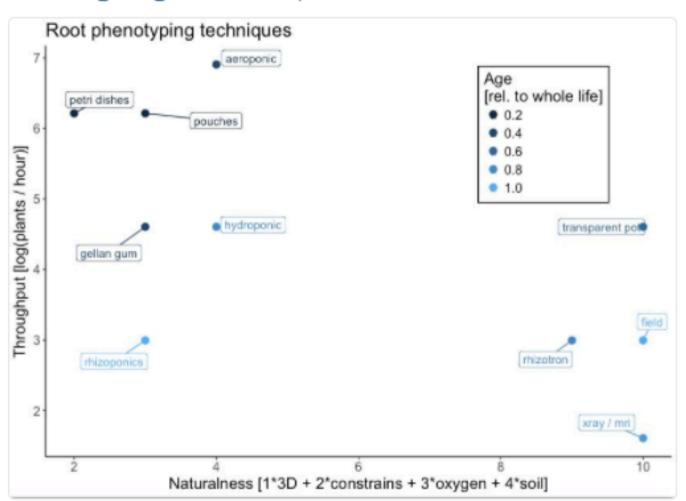




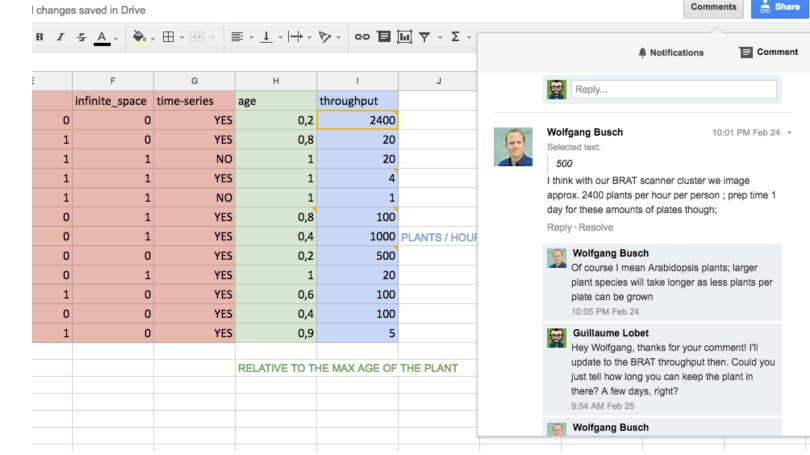
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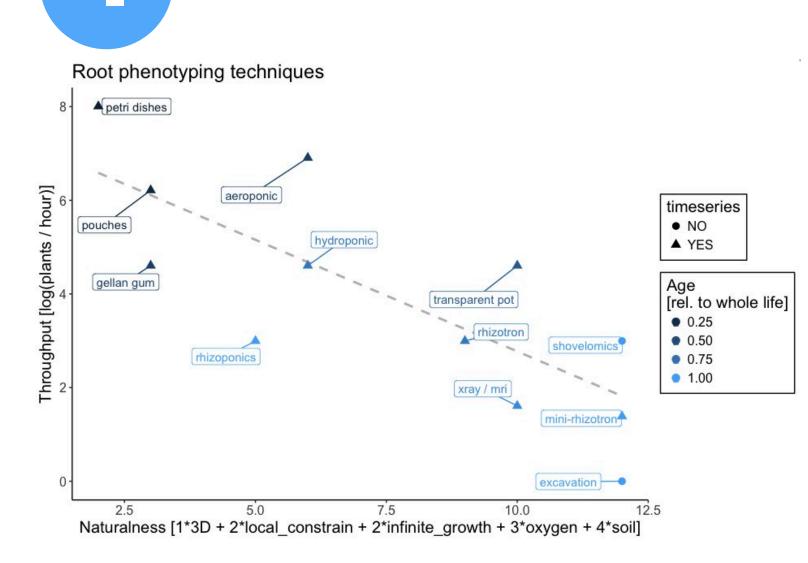
Guill@ume Lobet @guillaumelobet · Feb 24

Hey #root #phenotyping tweeps, I am trying to make a plot to compare #techniques . What do you thing? Comment here: docs.google.com/spreadsheets/d ...









@guillaumelobet Technique like hydroponic with 3d-printed mesh tower can only imaging crop root within about 10 DAT, very young seedlings.

TWITTER REVIEWING







@guillaumelobet did archisimple make 2d or 3d systems? if 3d, did you consider rotational effects on comparing 2d image traits?

8:47 PM - 16 Sep 2016









Larry M. York
@LarryMattYork

2:58 PM - 19 Sep 2016

1→ ₩ 1

@rrellanalvarez @guillaumelobet Semantics are hugely

important if we are to explain these difficult concepts! 1/2

@rrellanalvarez @guillaumelobet I had thought of doing the

same for parameter sets in SimRoot as SILICOTYPES! 2/2



Rubén Rellán @rrellanalvarez Rubén Rellán-Álvarez

@guillaumelobet @LarryMattYork would expect you could tell what a synthetype

1:13 PM - 19 Sep 2016









Guill@ume Lobet @guillaumelobet · 15 Sep 2016 We made a library of ground-truth root imgs > preprint: bit.ly/2cKxmmc @IkoKoevoets @cperilleux @PTocquin







http://dx.doi.org/10.1073/pnas.1304354110 @LarryMattYork both 2d and 3d are possible. We used 3d in this study, to mimic gellan gum setup (dx.doi.org/10.1073/pnas.1...) 9:18 AM - 19 Sep 2016











@LarryMattYork



Rubén Rellán @rrellanalvarez Rubén Rellán-Álvarez

@guillaumelobet @LarryMattYork t param. If synthetype ~= genotype to explain it just 1/2

1:42 PM - 19 Sep 2016









@guillaumelobet so then the 2d images are flattened projections of the 3d? could you rotate the 3d to different angles before flattening?1/n

2:51 PM - 19 Sep 2016











4:38 PM - 19 Sep 2016

♠ □

should coordinate on this one!

Guill@ume Lobet

2:58 PM - 19 Sep 2016

★ 以 1





@rrellanalvarez @LarryMattYork @rrellanalvarez Silicotype is nice as well :) We

@guillaumelobet @LarryMattYork 2/2

Rubén Rellán-Álvarez

1:42 PM - 19 Sep 2016









@guillaumelobet rotating 3d a few times before flattening would allow sensitivity analysis, mimics user placement for 'shovelomics' 2/2

2:51 PM - 19 Sep 2016









@rrellanalvarez @LarryMattYork well, that would be our synthetic loci AKA model parameter :)

1:27 PM - 19 Sep 2016

@guillaumelobet











@guillaumelobet @LarryMattYork that esteems as JLynch says from phenotype.

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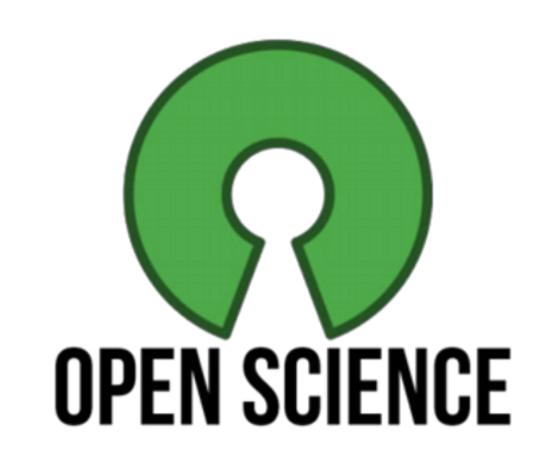


Ruben Rellan-Alvarez @rrellanalvarez

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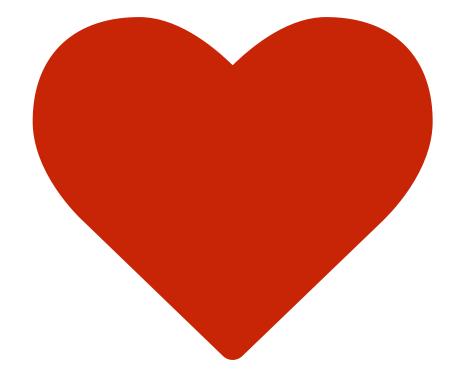
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