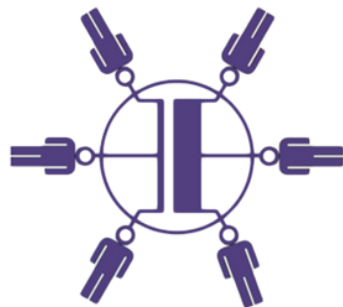


# CITIZEN SCIENCE: beyond opening data & research

**Egle Marija Ramanauskaitė**

Citizen Science Coordinator  
Human Computation Institute

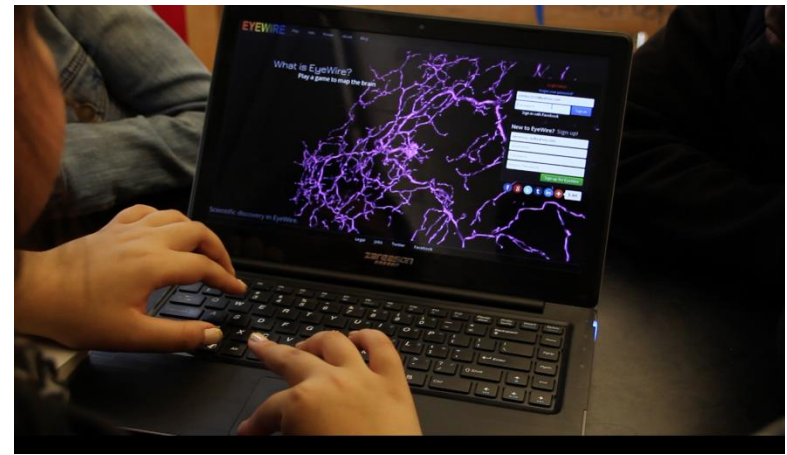
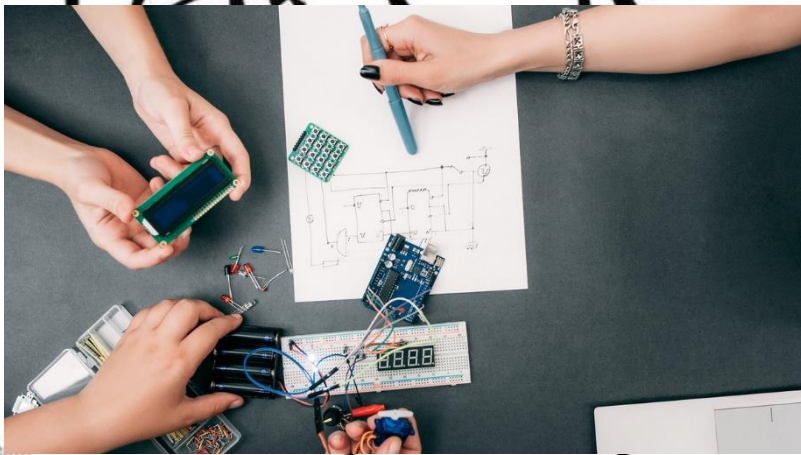


HUMAN  
COMPUTATION  
INSTITUTE



**OPENCON 2017**  
LITHUANIA

# What is **CITIZEN SCIENCE**?



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"

For us working in  
**citizen science**, it's  
more or less intuitive  
that we're part of the  
**open science** ecosystem.  
But the feeling is not  
always reciprocated.

# OPEN SCIENCE still researcher-centric?

INDICATORS

Helping Researchers Succeed

researchers are unable to access informa  
and scientific progress is hampered from

more media coverage. Sharing article  
lets helps researchers get noticed, and  
nce is not widespread at this  
would affect their career.

Contrary to what some might think,

Researcher  
attitudes  
towards data  
sharing

with more citations causing

corrections  
and  
retractions

that have to pay to read them

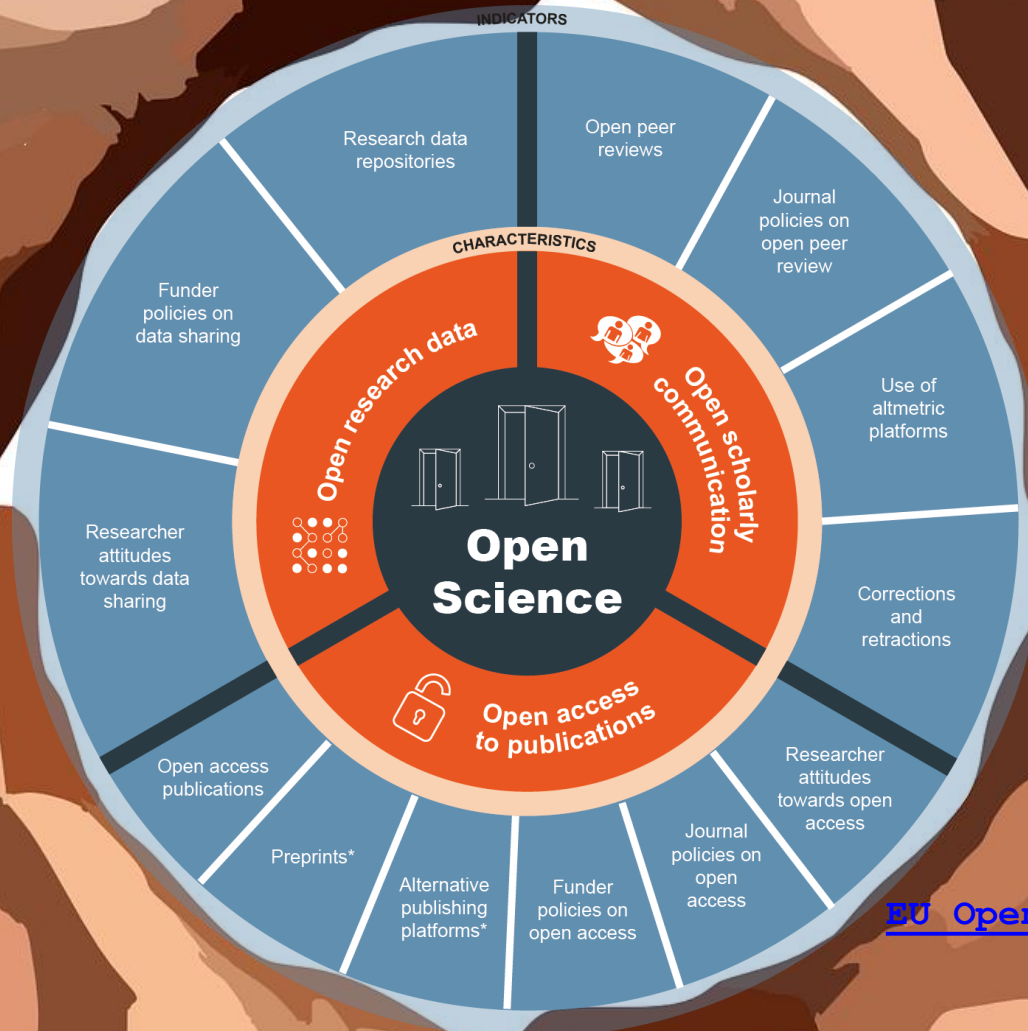
open sharing of articles, code, and data is beneficial for researchers

, but, often, it is difficult to identify and connect with the appropriate  
as it is easier for researchers to connect with one another because  
of their work which facilitates easy access to novel data and

towards open  
access

[EU Open Science Monitor](#)

# What about **inclusivity** & **participation**?



# Open Science is ...

## Open to participation

- No barriers based on race, gender, income, status
- Involvement of societal partners in research priority setting
- Evaluations that include societal relevance
- Citizen science

## Open to (re)use

- Open Access, for people and machines, to:
  - Proposals and applications
  - Data and code
  - Preprints, working papers
  - Papers and books
  - Reviews and comments
  - Posters and presentations
- Open, non-proprietary standards
- Open licences
- Full documentation of process

## Open to the world

- Translations
- Plain language explanations
- Outreach beyond academia
- Open to questions from outside academia
- Curation and annotation of non-scholarly information
- Participation in public debate

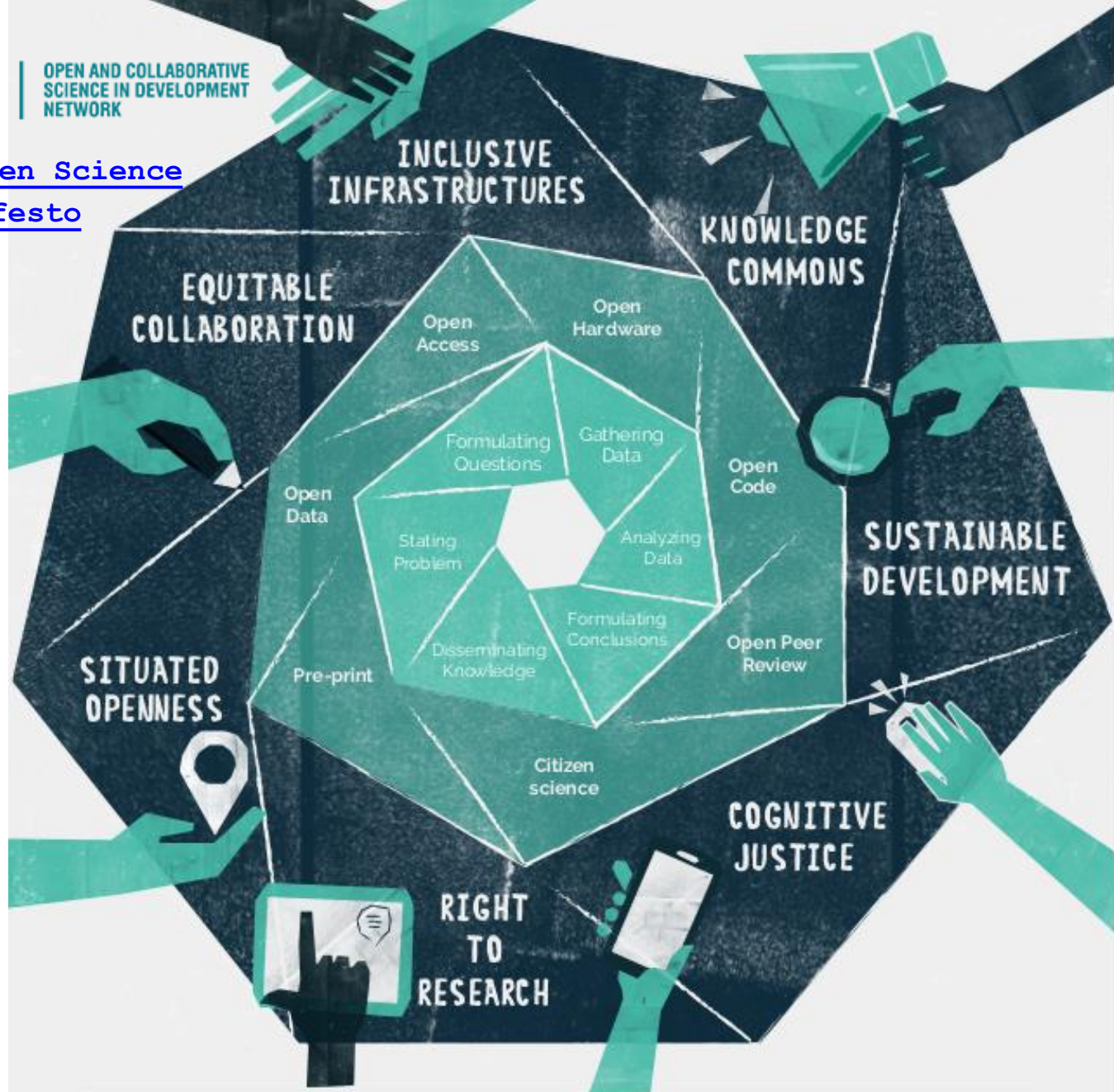
adapted from slide  
by [Bosman & Kramer](#)





OPEN AND COLLABORATIVE  
SCIENCE IN DEVELOPMENT  
NETWORK

OSCDnet Open Science  
Manifesto



**RESEARCH  
CYCLE**

**OPEN SCIENCE  
INITIATIVES**

**OPEN AND COLLABORATIVE  
PRINCIPLES**

“The potential of Open and Collaborative Science lies in the processes of **participation** it encourages and the way it equips people with the skills and tools they need to be part of scientific production as **equal partners** and **decision makers**.” - [OSCDnet Open Science Manifesto](#)



# Ultimate goal of **OPEN SCIENCE** AND **CITIZEN SCIENCE** ?

We believe this is the ultimate goal: an **inclusive science** that not only meets the material and intellectual needs of society but that improves our well-being, achieves social justice and empowers every individual to use knowledge as a pathway to the sustainable development of their communities

WE AS SCIENTISTS, DEVELOPMENT PRACTITIONERS, ACTIVISTS,

PROPOSE THAT OPEN & COLLABORATIVE SCIENCE...

[OSCDnet Open Science Manifesto](#)

1

Enables a knowledge

2

Integrates diverse

3

Addresses the role of **power and inequality** in knowledge production and sharing

4

Creates **opportunities for participation** at all stages of the research process

5

6

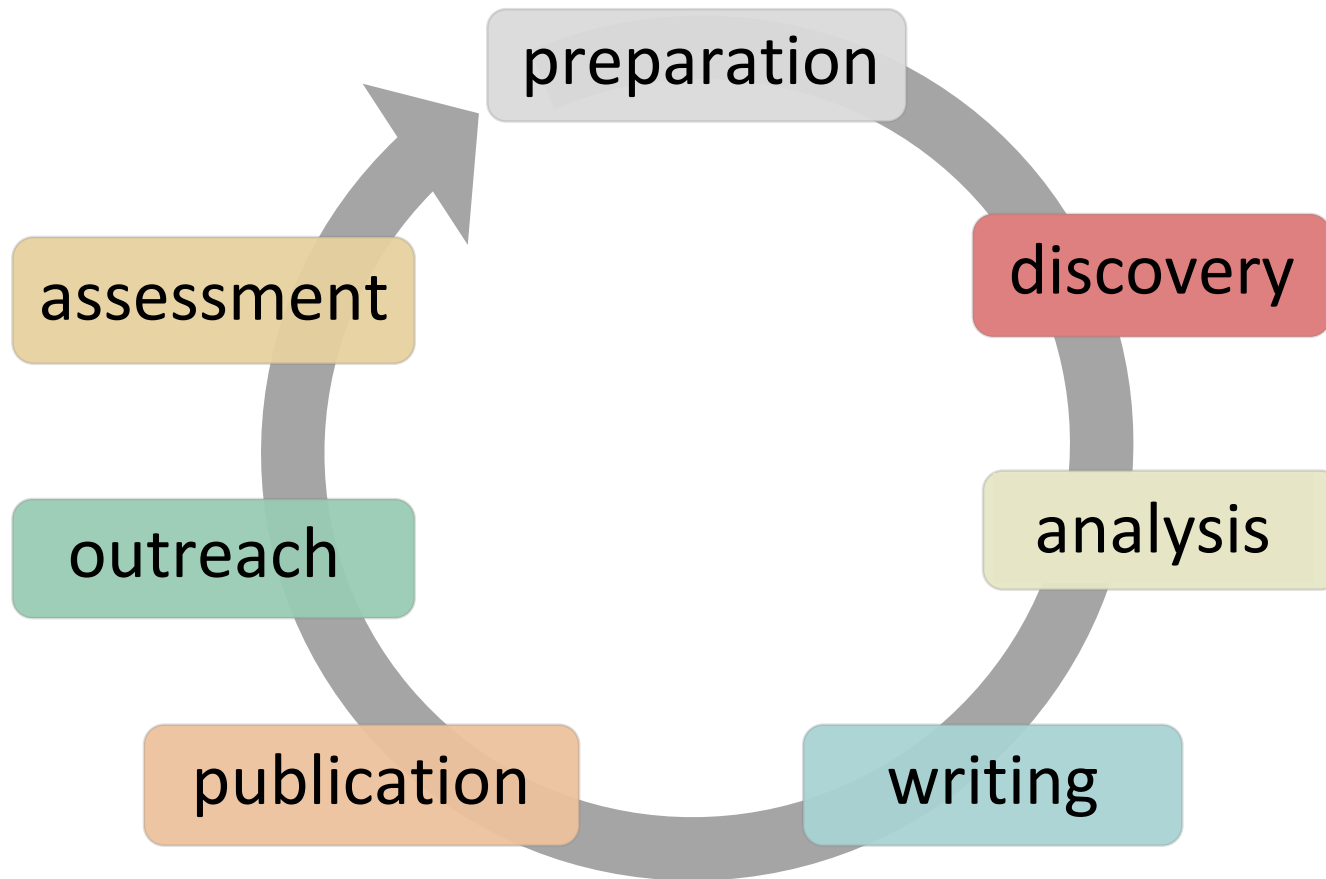
Incentivizes the design of **inclusive infrastructures**

7

Improves the **social and environmental well-being** of our society and planet

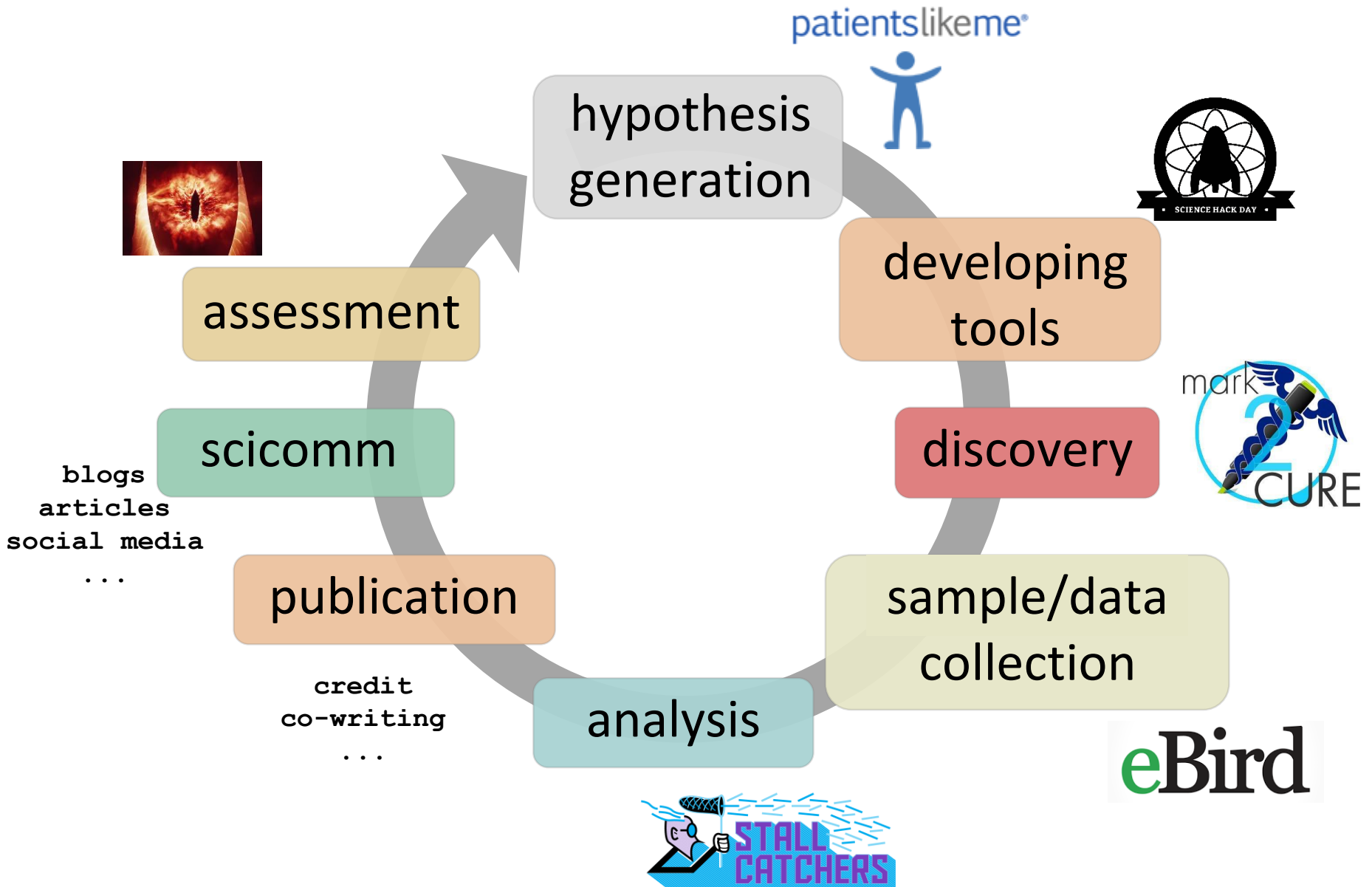
ors

# Research workflow



Adapted from slide by [Bosman & Kramer \(2017\) – Vienna Open Science workshop](#)

# Participation at every step



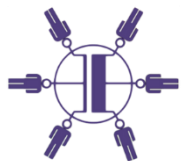
# Hypothesis Generation



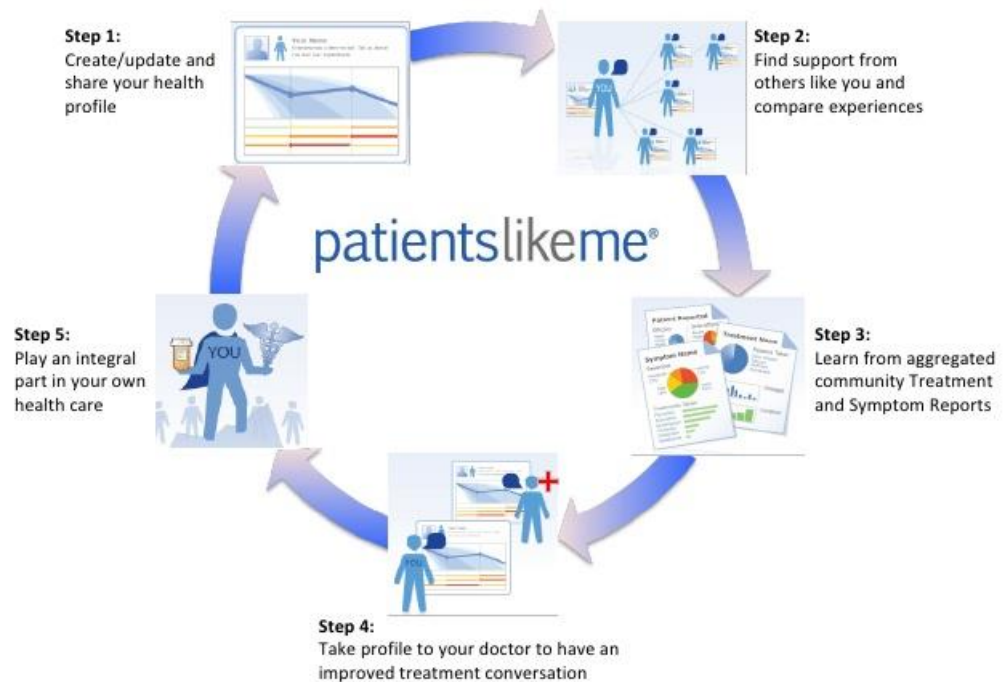
The PatientsLikeMe process is to help people share their health information in order to learn from others like them and then use that information to discuss treatment options with their health care team

## MeSearch

OPEN INNOVATION  
IN SCIENCE

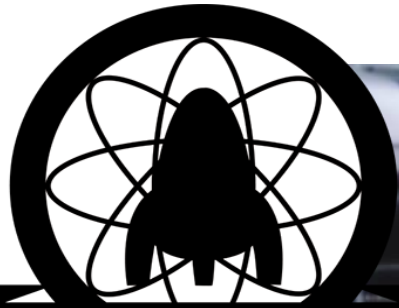


HUMAN  
COMPUTATION  
INSTITUTE





# Developing tools



SCIENCE HACK DAY

VILNIUS

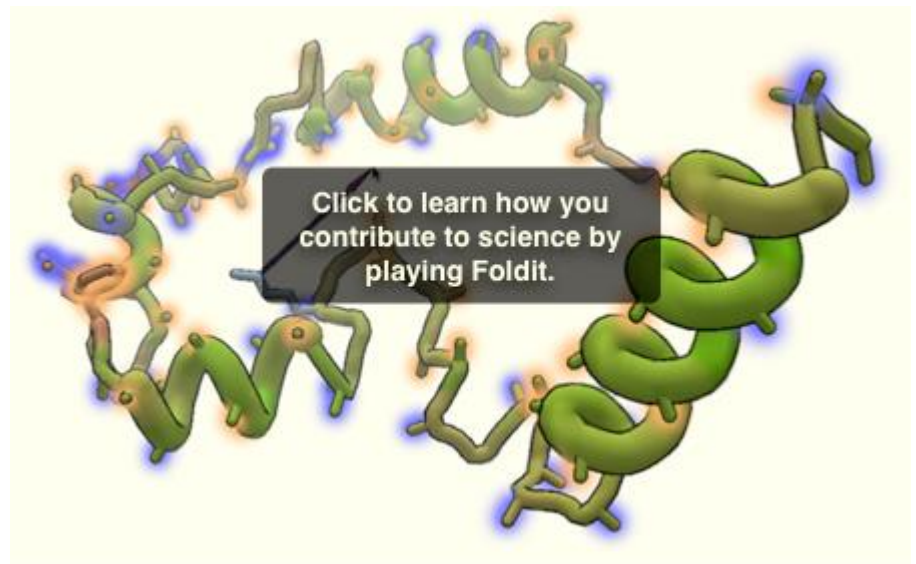


**Feb 10-11, 2018**

# Discovery



This allows **researchers** to find the **information** they need more **efficiently** **enabling** them to move more **quickly** to identify new **cures** .



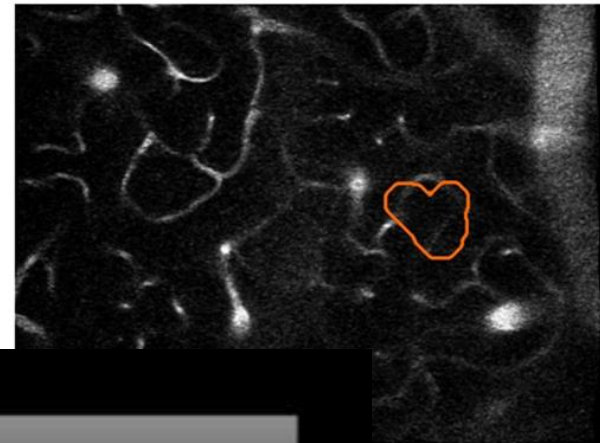
# Sample/Data collection



eBird



# Data analysis



# Publication

Science

Home News Journals Topics Careers



RESEARCH ARTICLE

## Evidence for interstellar origin of seven dust particles collected by the Stardust spacecraft

Andrew J. Westphal<sup>1,\*</sup>, Rhonda M. Stroud<sup>2</sup>, Hans A. Bechtel<sup>3</sup>, Frank E. Brenker<sup>4</sup>, Anna L. Butterworth<sup>1</sup>, George J. Flynn<sup>5</sup>, David R. Frank<sup>6</sup>, Zack Gainsforth<sup>1</sup>, Jon K. Hillier<sup>7</sup>, Frank Postberg<sup>7</sup>, Alexandre S. Simionovici<sup>8</sup>, Veerle J. Sterken<sup>9,10,11,12</sup>, Larry R. Nittler<sup>13</sup>, Carlton Allen<sup>14</sup>, David Anderson<sup>1</sup>, Asna Ansari<sup>15</sup>, Saša Bajt<sup>16</sup>, Ron K. Bastien<sup>6</sup>, Nabil Bassim<sup>2</sup>, John Bridges<sup>17</sup>, Donald E. Brownlee<sup>18</sup>, Mark Burchell<sup>19</sup>, Manfred Burghammer<sup>20</sup>, Hitesh Changela<sup>21</sup>, Peter Cloetens<sup>22</sup>, Andrew M. Davis<sup>23</sup>, Ryan Doll<sup>24</sup>, Christine Floss<sup>24</sup>, Eberhard Grün<sup>25</sup>, Philipp R. Heck<sup>15</sup>, Peter Hoppe<sup>26</sup>, Bruce Hudson<sup>27</sup>, Joachim Huth<sup>26</sup>, Anton Kearsley<sup>28</sup>, Ashley J. King<sup>23</sup>, Barry Lai<sup>29</sup>, Jan Leitner<sup>26</sup>, Laurence Lemelle<sup>30</sup>, Ariel Leonard<sup>24</sup>, Hugues Leroux<sup>31</sup>, Robert Lettieri<sup>1</sup>, William Marchant<sup>1</sup>, Ryan Ogliore<sup>32</sup>, Wei Jia Ong<sup>24</sup>, Mark C. Price<sup>19</sup>, Scott A. Sandford<sup>33</sup>, Juan-Angel Sans Tresseras<sup>22</sup>, Sylvia Schmitz<sup>4</sup>, Tom Schoonjans<sup>20</sup>, Kate Schreiber<sup>24</sup>, Geert Silversmit<sup>20</sup>, Vicente A. Solé<sup>22</sup>, Ralf Srama<sup>34</sup>, Frank Stadermann<sup>24,†</sup>, Thomas Stephan<sup>23</sup>, Julien Stodolna<sup>1</sup>, Stephen Sutton<sup>29</sup>, Mario Trieloff<sup>7</sup>, Peter Tsou<sup>35</sup>, Tolek Tyliczszak<sup>3</sup>, Bart Vekemans<sup>20</sup>, Laszlo Vincze<sup>20</sup>, Joshua Von Korff<sup>1</sup>, Naomi Wordsworth<sup>36</sup>, Daniel Zevin<sup>1</sup>, Michael E. Zolensky<sup>14</sup>, [30714 Stardust@home dusters](#)<sup>37</sup>



# SciComm

My team is:  
GvirtsOvi  
(change team)

All teams ▾ Today ▾

Team Humanity	1926369
1. I See Stars	439,625
2. UNIVIE	253,193 ↑
3. Citizen Science Plus	198,871
4. CrowdAndCloud	158,314
5. Stalls to the wall	87,152
6. Alzheimer's Research UK	49,880
7. Abolment	48,447
8. ALZCrushers	32,438 ↑
9. Science Soup	27,535
10. CitiSci Gamers	25,752

Join the Austrian Catchathon at 5pm UTC & get double points!

Autoscroll  
 Show answer

Score 1273  
Level 4  
Next 1815  
Rank 2042  
Movies 17  
Stalls 1

No points yet.  
Check back!

Today ▾

- 1. Carol aka Mema 439,625
- 2. GnatGib 334,901
- 3. barbo 158,314
- 4. annabel 141,565
- 5. Unisalz 140,019
- 6. 94,196

Flowing  Flag movie Stalled



**Ingrida Mazonaviciute**

21 September · 🌐

Draugai. Šiandien Tarptautinė Alzheimerio ligos diena. Kad tai nebūtų tik eilinė diena, kviečiu pabūti mokslininkais, prisidėti prie šios ligos tyrimų žaidžiant žaidimą <https://stallcatchers.com>. Turėdama laisvą minutę žaidžiu ir aš, kviečiu ir Jus. #stallcatchers

266 Views



# Assessment

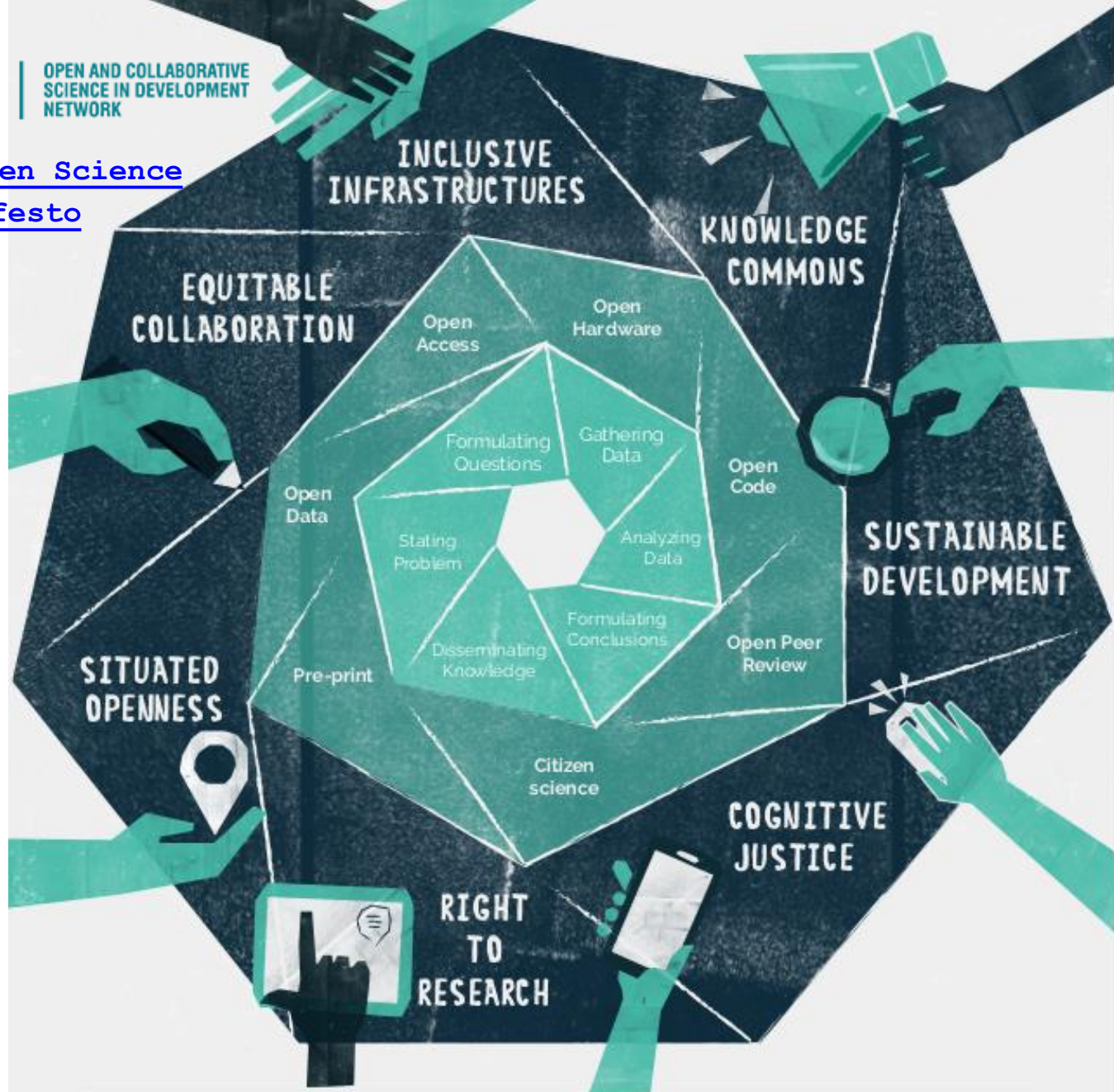






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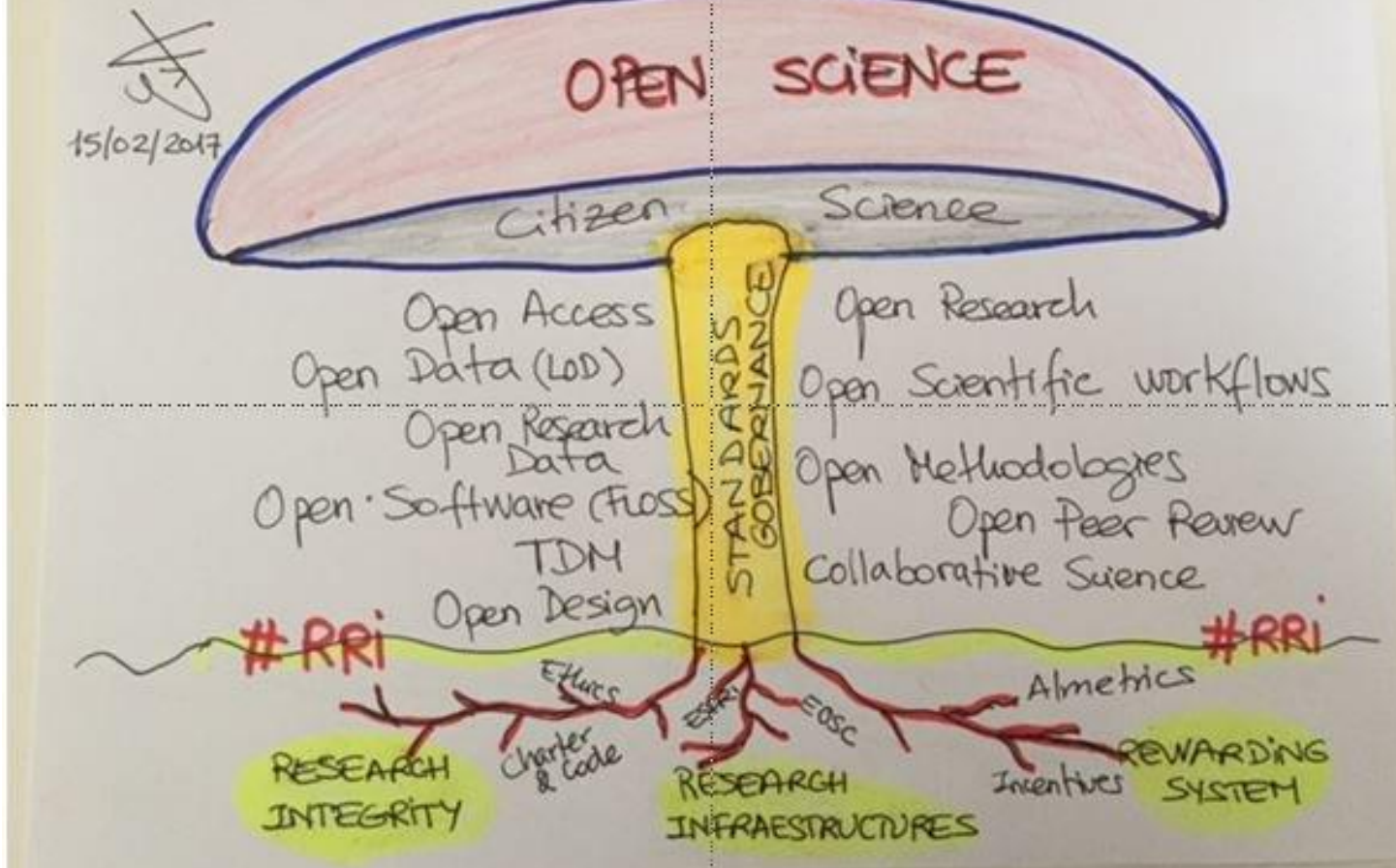
**OPEN SCIENCE  
INITIATIVES**

**OPEN AND COLLABORATIVE  
PRINCIPLES**

# THANK YOU!



by [Eva Mendéz](#)



@Seplute @eyesonalz

emramanauskaitė@gmail.com