OPEN KNOWLEDGE FINLAND

aVOIMEN TIETEEN TYÖRYHMÄ

OPEN CITIZEN SCIENCE PROJECT

By Heidi Laine
heidi.laine@okf.fi / @heidiklaine

This work is licensed under a Creative Commons Attribution 4.0 International License.

PROJECT FUNDED BY THE OPEN SCIENCE AND RESEARCH INITIATIVE

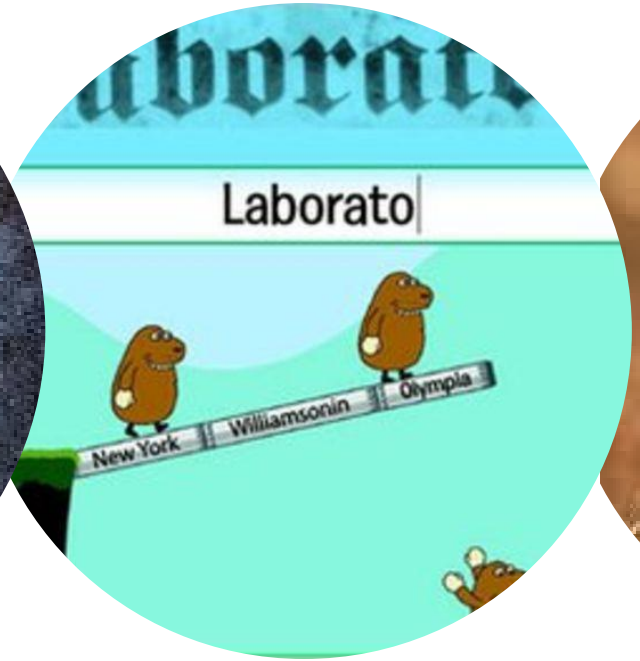
GOAL OF THE PROJECT

- create discussion on citizen science
- form understanding about the possibilities of citizen science
- provide recommendations for national level policy action.

CITIZEN SCIENCE

“Citizen science is a flexible concept [...] Citizen science projects actively involve citizens in scientific endeavour that generates new knowledge or understanding. [...] Citizen science projects have a genuine science outcome.” - ECSA: 10 Principles of Citizen Science http://ecsa.citizen-science.net/documents

GALAXY ZOO



DIGITALKOOT

KEVÄTSEURANTA

SIX DEGREES OF OPEN SCIENCE

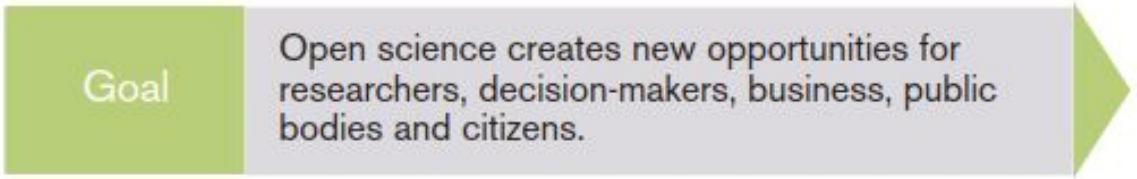
Open Science in Practice: Researcher Perspectives and Participation, Whyte, Angus & Pryor, Graham. The International Journal of Digital Curation, Issue 1, Volume 6 | 2011

Private management
Collaborative sharing
Peer exchange
Transparent governance
Community sharing
Public sharing*

*Sharing where resources are made available for access by any member of the public, at least some data or metadata on the research activity is designed to be understood by a lay audience and reused by a designated research community, and with few restrictions - such as a limited embargo period.

POLICY PUSH FOR CITIZEN SCIENCE

FINNISH OPEN SCIENCE ROADMAP 2014-17 ON CITIZEN SCIENCE



“When this objective has been achieved [...s]cientific literacy will have increased among citizens,[...c]itizen science will have progressed. Circulating and announcing research results outside the academic community will have become standard practice.”

http://openscience.fi/open-science-and-research-roadmap-2014-2017

EC DRAFT OPEN SCIENCE AGENDA

Need to remove obstacles to the involvement in research (as co-producers) of non-academic actors	Allow research funders to provide specific incentives for 'collaborative science' including societal actors and citizen science	Consider adapting The Rules for Participation and/or Model Grant Agreement to enable launching Open Science pilots (e.g. under H2020)	Citizen science eligible for funding. Introduce openness as criterion for receiving research funding	Strong stakeholders support (more than 80% agree)
Need to foster stronger relation between science and society as well as science and business actors to accelerate innovation	Better network societal, entrepreneurial and scientific actors through e.g. 'knowledge coalitions'	Set up and support 'knowledge coalitions' to address common societal challenges as per H2020. Implement Joint Open Science Initiatives (JOSI's)	Invite companies/SME's and universities to events to brainstorm around different business opportunities	Stakeholder consensus on the need to address societal challenges and faster and wider innovation

LERU will publish their advice on citizen science and universities on 7 Nov. 2016

Sneak peek to LERU recommendations for Universities

1. Recognise CS as a method
2. Single point of contact on CS within institution
3. Criteria for successful CS
4. Include long-term support for CS infra in grant proposals
5. Ethical, legal, privacy constraints respected
6. Adapt evaluation, reputation systems to CS

ARGUMENTS FOR CITIZEN SCIENCE

“Citizen volunteers cost even less than postdocs, it turns out.” - Jason Lloyd: Citizen Science Isn’t Just About Collecting Data http://www.slate.com/articles/technology/future_tense/2016/08/citizen_science_isn_t_just_about_collecting_data.html

“Presidential science advisor John Holdren estimated in September 2015 that time and labor donated by citizen scientist to biodiversity research had an ‘economic value up to $ 2,5 billion per year’.” - Darlene Cavalier, Eric B. Kennedy: The Tightful Place of Science: Citizen Science (Consortium of Science, Policy & Outcomes, 2016)

UNTAPPED KNOWLEDGE POTENTIAL

“Citizen scientists collect more than data. They gather meaning.” - Bonney, Rick, and Janis L. Dickinson. Citizen Science : Public Participation In Environmental Research. Ithaca: Comstock Pub. Associates, 2012. eBook Collection (EBSCOhost). Web. 20 Oct. 2016.

LESS BUDGET CUTS?

Stronger appreciation for science among citizens and policy makers.

RESEARCH THAT HAS REAL IMPACT

Through evidence based policy making, evidence based health care, evidence based daily lives.

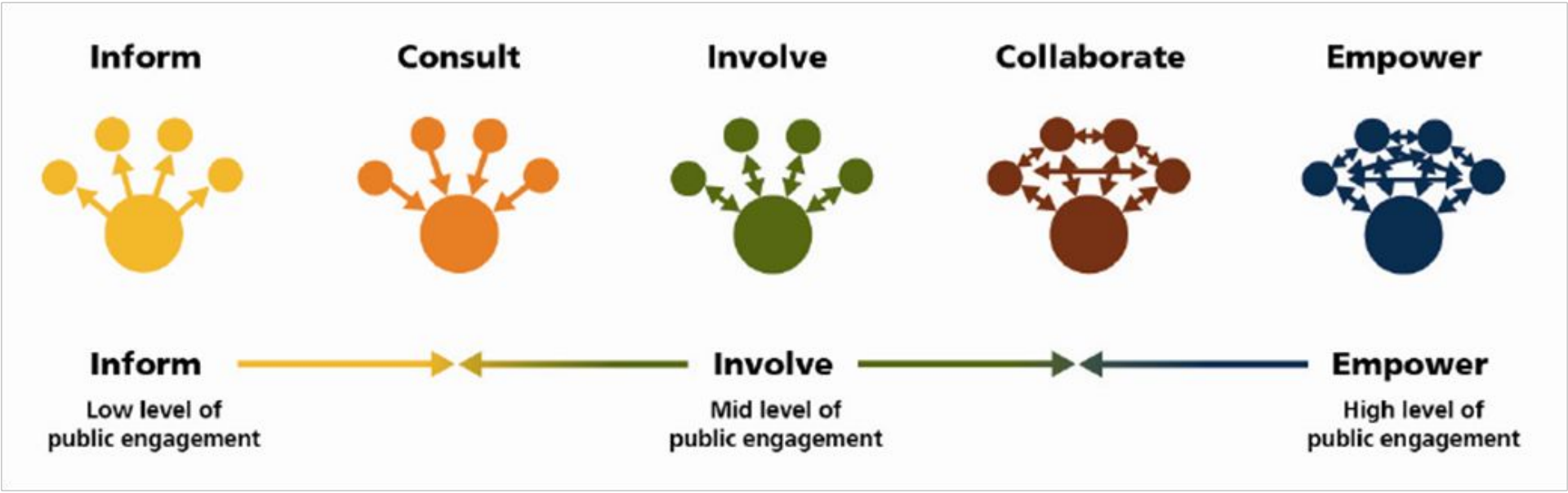
MORE RESPONSIBLE SCIENCE?

“retractions, fraudulent practices, reproducibility problems, conflicts of interest, conflicting results, and simple irrelevance.[...] scientists are rarely accountable to anything outside their community.”-

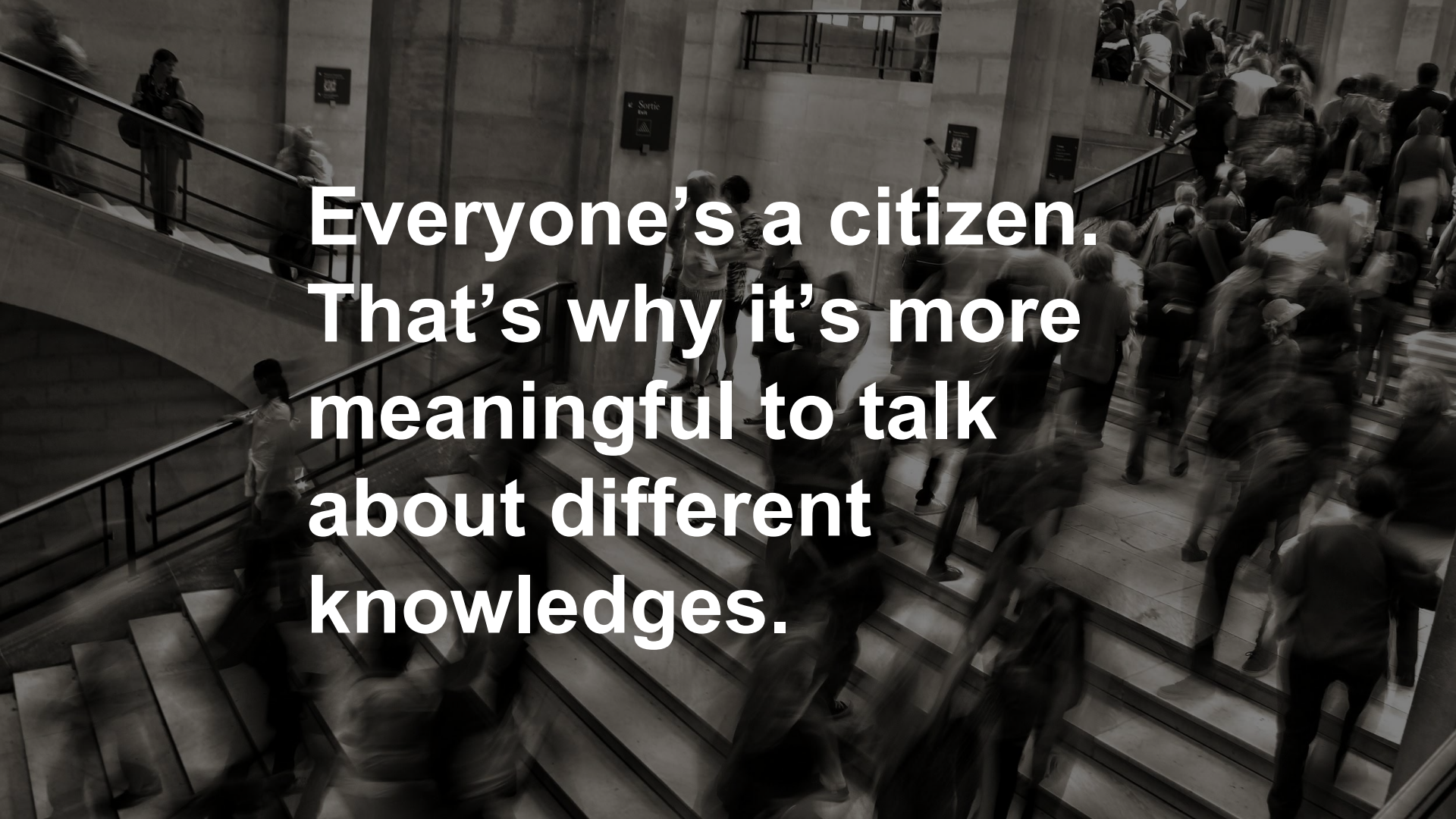
Jason Lloyd: Citizen Science Isn’t Just About Collecting Data
http://www.slate.com/articles/technology/future_tense/2016/08/citizen_science_isn_t_just_about_collecting_data.html

HOW COULD CITIZEN SCIENCE BE MORE OPEN?

IAP2 Best Practice Standards for Public Participation



THIS TOO, IS SCIENCE


Everyone’s a citizen.
That’s why it’s more
meaningful to talk
about different
knowledges.

UMBRELLA CONCEPT

Could Citizen Science the concept be like Open Science? A value rather than a method or design, something that all research should strive towards: happening in a multidisciplinary “[...] framework where diverse expertises are given legitimate status.” (Alan Irwin, 1995)

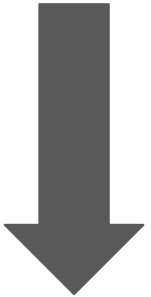
CITIZEN SCIENCE TOOLBOX

Crowdsourcing
Social media research
Extended peer communities
Extended peer review
Biobanks
Ethnography
Oral History

MyData
Clinical trials
Co-design
Surveys
Games and quizzes
Crowdcrafting

SIX DEGREES OF CITIZEN SCIENCE?

From popular science, science as entertainment...



… to co-design, even science without professional researchers.

WHAT MAKES IT PAINFUL

Letting go of the notions that…

… public is ignorant.

… science is objective.

… facts speak for themselves.

… boundaries between scientific disciplines are lasting and meaningful.

WHAT ARE THE BUILDING BLOCKS STILL MISSING?

Repositories?
Standards?
Funding?
Legislation?
Awareness?
Education?
Fora?
Platforms?
Channels?
Language?
Interoperability?
Political will?

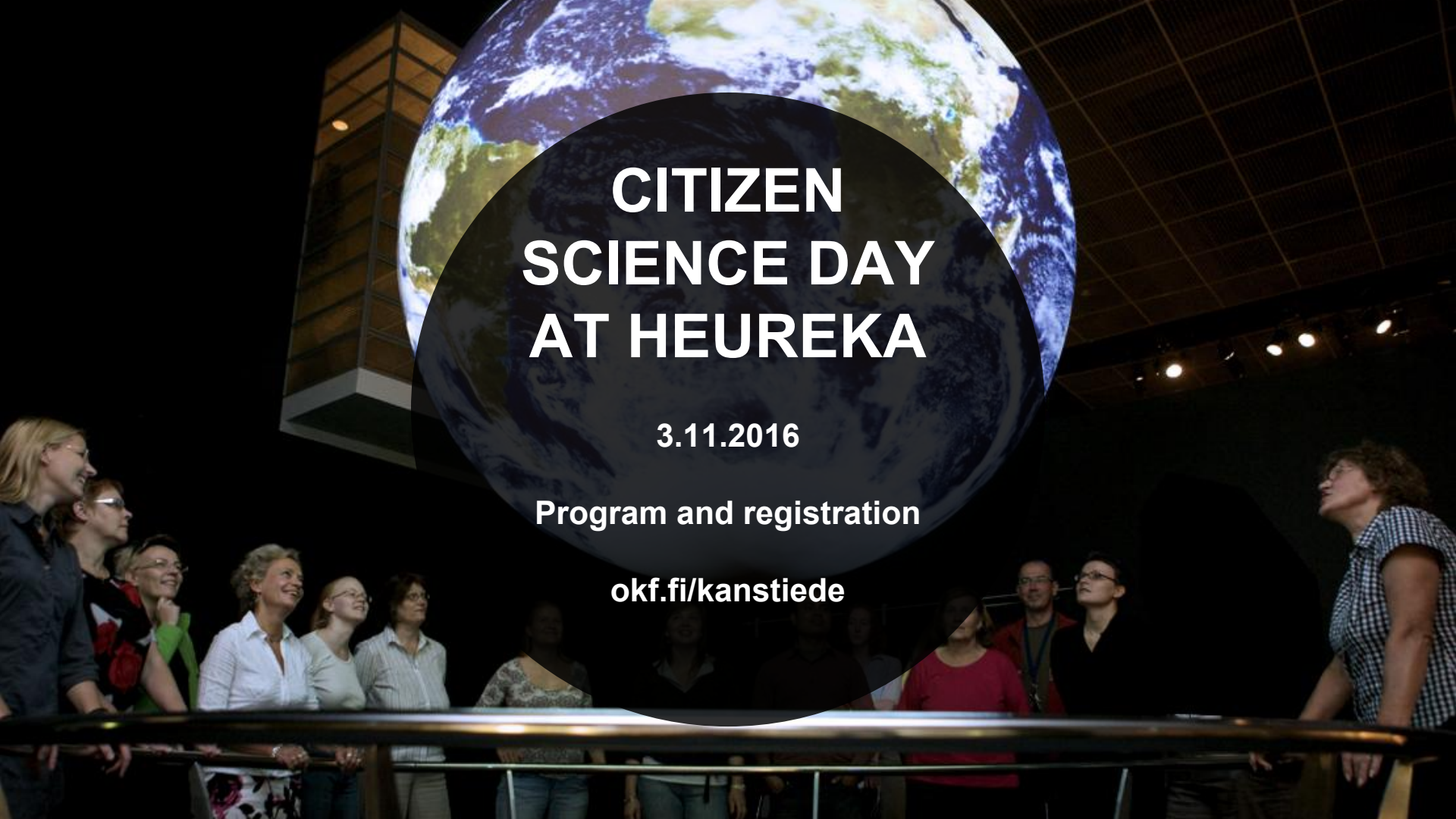
Openness in Education and Research 28.10.2016

From 9.30 to 15.30
Athena, Siltavuorenpenger 3A, hall 302

13.10-15.00 Citizen Science as a Research Method

Possibilities and challenges of Citizen Science in research from viewpoint of training, technology etc. What kind of experiences we have and what researchers should know?

More info at
avointiede.fi/osaajakoulutuksen-ohjelma



CITIZEN SCIENCE DAY AT HEUREKA

3.11.2016

Program and registration

okf.fi/kanstiede

All pictures CC0 from unsplash.com, except Open Knowledge Finland logo (CC BY), slide 2 and 5 pictures from websites of respective project organizers and slide 27 picture from Science Centre Heureka image bank.

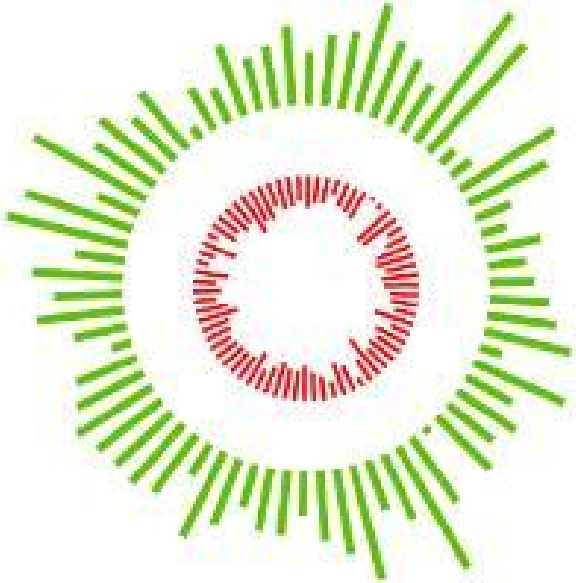
For the pictures in slides 2, 5 and 27 license is not known, so please visit avointiede.fi, galaxyzoo.com, digitalkoot.fi, luontoliitto.fi, heureka.fi before reusing them.

CONTACT

heidi.laine [a] okf.fi

raimo.muurinen [a] okf.fi

konsta.happonen [a] okf.fi



OPEN KNOWLEDGE FINLAND