



European  
Citizen Science  
Association



# WEBINAR

## Co-shaping Evaluation in Citizen Science?

Towards more participatory approaches in  
evaluation of Citizen Science



**Wednesday, 27th January 2021**  
**4:00 p.m. - 6:00 p.m. CET**



Anna Cigarini  
University of Barcelona  
CoAct



Barbara Kieslinger  
ZSI - CoAct



Johannes Jäger  
IEA Paris/Paris-Saclay



Katie Richards- Schuster  
University of Michigan



Katja Mayer  
ZSI - CoAct  
University of Vienna



Obialunanma Nnaobi  
Vilsquare

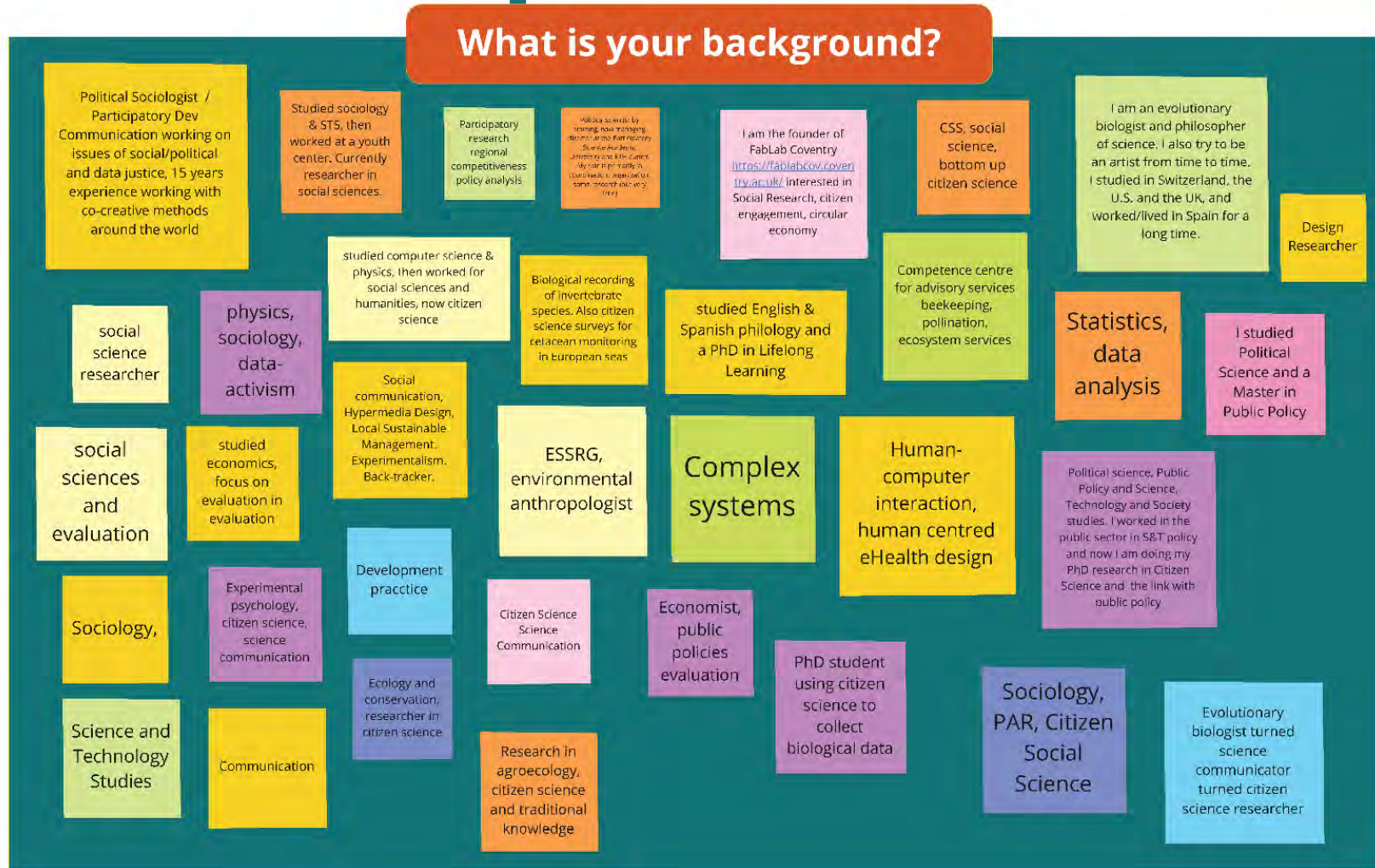


Teresa Schäfer  
ZSI - CoAct



Stefanie Schürz  
ZSI - CoAct

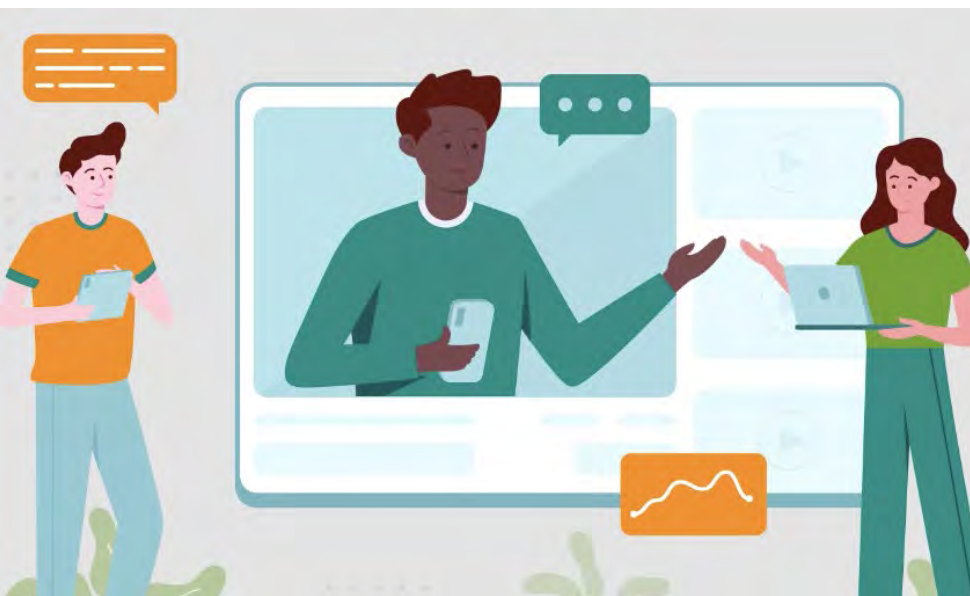
# Webinar Participants ....



# Webinar Participants ....

## Where are you joining from? (City, Country)





# CoAct Webinar: Co-Shaping Evaluation in Citizen Science?

Barbara Kieslinger, Katja Mayer, Teresa Schäfer,  
(Centre for Social Innovation, Vienna, Austria)

In cooperation with EU-Citizen.science and ECSCA

27 January 2021 4-6 pm CET



## Motivation: Evaluation in Citizen Science

- Practice what you preach
- Learn more about roles and functions of CS beyond “academic impact”
- Lots of evaluation instruments available already
- Digital and participatory dimensions covered

### **BUT:**

- Few instruments actually adopted
- Assessment of project success and further impact still follows logics of typical academic research projects
- Not enough links to other communities of practice



# Webinar Agenda (2h)

Min	Section	Description
10	Arrival and Welcome	Short introductory round and welcome, incl. a brief summary of the CoAct project
30	<b>Co-Evaluation Primer</b> Barbara Kieslinger, Katja Mayer, Teresa Schäfer	Lecture on evaluation in citizen science, with a special focus on participatory evaluation formats that could be implemented from the start of the project, giving voice and decisive power to the participants in the choice of evaluation criteria and instrument.
5	Break	
40	<b>Conversations on experiences</b> Katie Richards-Schuster, Obialunanma Nnaobi, Johannes Jäger, Anna Cigarini	Discussants share their experiences with participatory evaluation in brief lightning presentations. Then the discussion will revolve around challenges and benefits of such evaluation (informed consent, ownership, overload, ..) and options and (potential) instruments for co-evaluation
25	Discussion/Q&A	Discussion of questions posted to the chat
10	Feedback and Sendoff	Feedback session



## Recording and Documentation

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Personal information you shared at registration will not be connected to the recorded materials and will not be shared with any third-party. If you would like to stay in touch, please contact [coact.webinar@zsi.at](mailto:coact.webinar@zsi.at)



## Objectives of this Webinar

- Learning from our peers: why more participation is good for evaluation
- Better understanding of how to give voice to the stakeholders of an intervention in its evaluation design, process and results.
- Overview of (participatory) evaluation methods in Citizen Science so far
- Introduction to our approach to co-evaluation
- Mutual learning and discussing experiences of participatory evaluation, with a special focus on challenges and opportunities in times of crises and physical distancing.





# CoAct!

## CITIZEN SOCIAL SCIENCE

Life experience and self-perception of adult citizens with experience of mental disorders are not placed at the center of mental health care provision.

### MENTAL HEALTH CARE Barcelona

Adult citizens with experience of mental disorders and their families.



Young people in most need of help and assistance do not use 'youth coaching' and do not find any place of training and education.

### YOUTH EMPLOYMENT Vienna

Young early school leavers who are in precarious socio-economic position and with difficulties of finding a job.



Environmental Justice is not guaranteed because inhabitants do not participate on the concrete definition of the problem nor on the socio-environmental risks.

### ENVIRONMENTAL JUSTICE Buenos Aires

Inhabitants in a highly polluted and crowded shanty town.



Three Open Calls for Citizen-led Research in various EU locations

### GENDER EQUALITY Europe

Gender Equality is a concern globally shared.



## Co-Designing Citizen Social Science for Collective Action

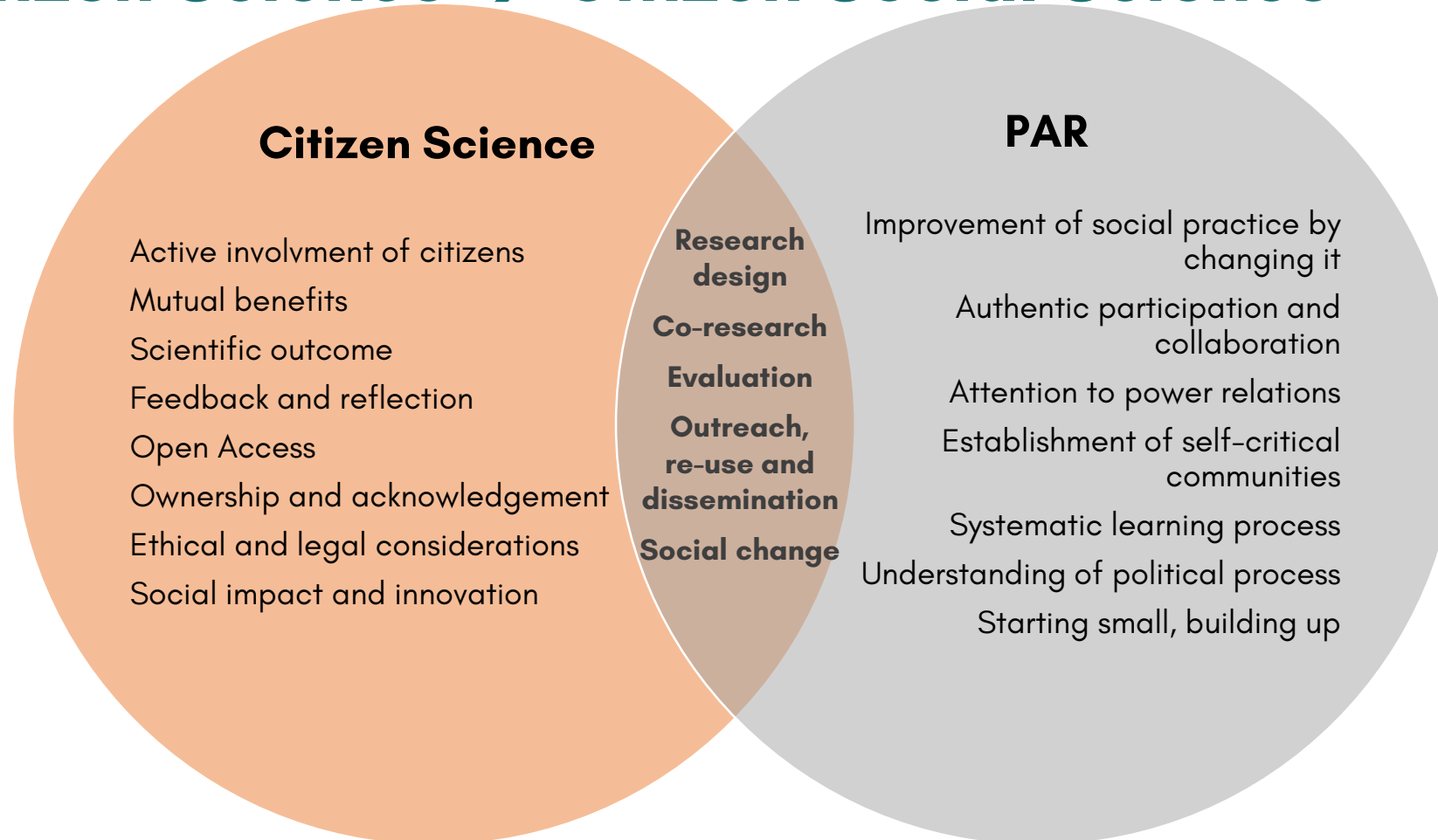
- Funded by the European Union's Horizon 2020 research and innovation programme
- CSS as participatory research co-designed and directly driven by citizen groups sharing a social concern
- Participants as equal co-researchers
- Bring together and further develop methods to give citizen groups an equal 'seat at the table'

<https://coactproject.eu/>



The CoAct project has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No. 873048

# CoAct: Combining Participatory Social Research and Citizen Science → Citizen Social Science



# Introduction to (Participatory) Evaluation in Citizen Science



Katja Mayer  
ZSI - CoAct  
University of Vienna



Barbara Kieslinger  
ZSI - CoAct



Teresa Schäfer  
ZSI - CoAct



# What is Already Evaluated in Citizen Science and How?

The Cornell Lab of Ornithology

## Introduction to the User's Guide for Evaluating Learning Outcomes from Citizen Science

Tina Phillips, Cornell Lab of Ornithology  
Marion Ferguson, Cornell Lab of Ornithology

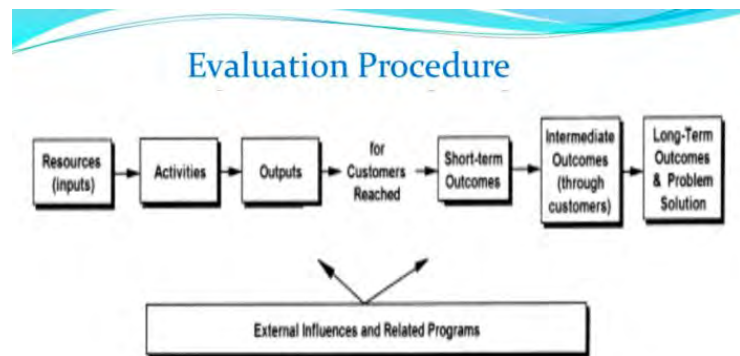
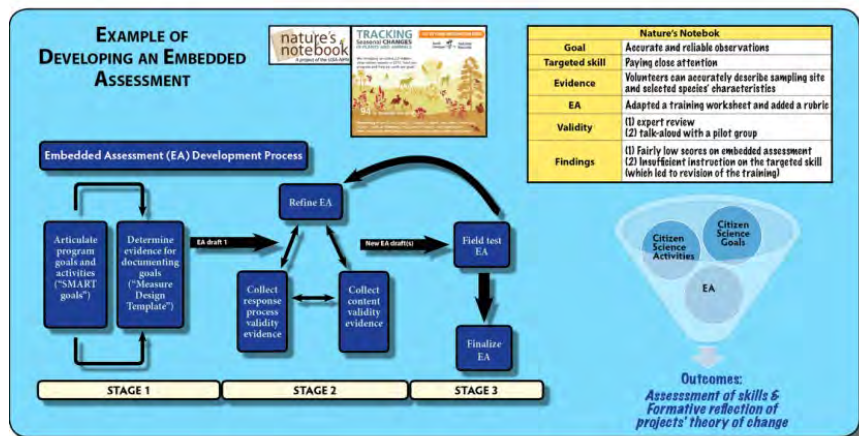
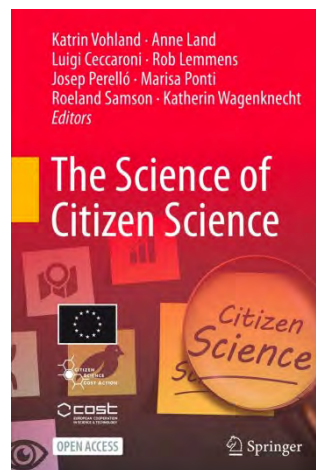


Fig. 1. Elements of the Logic Model.

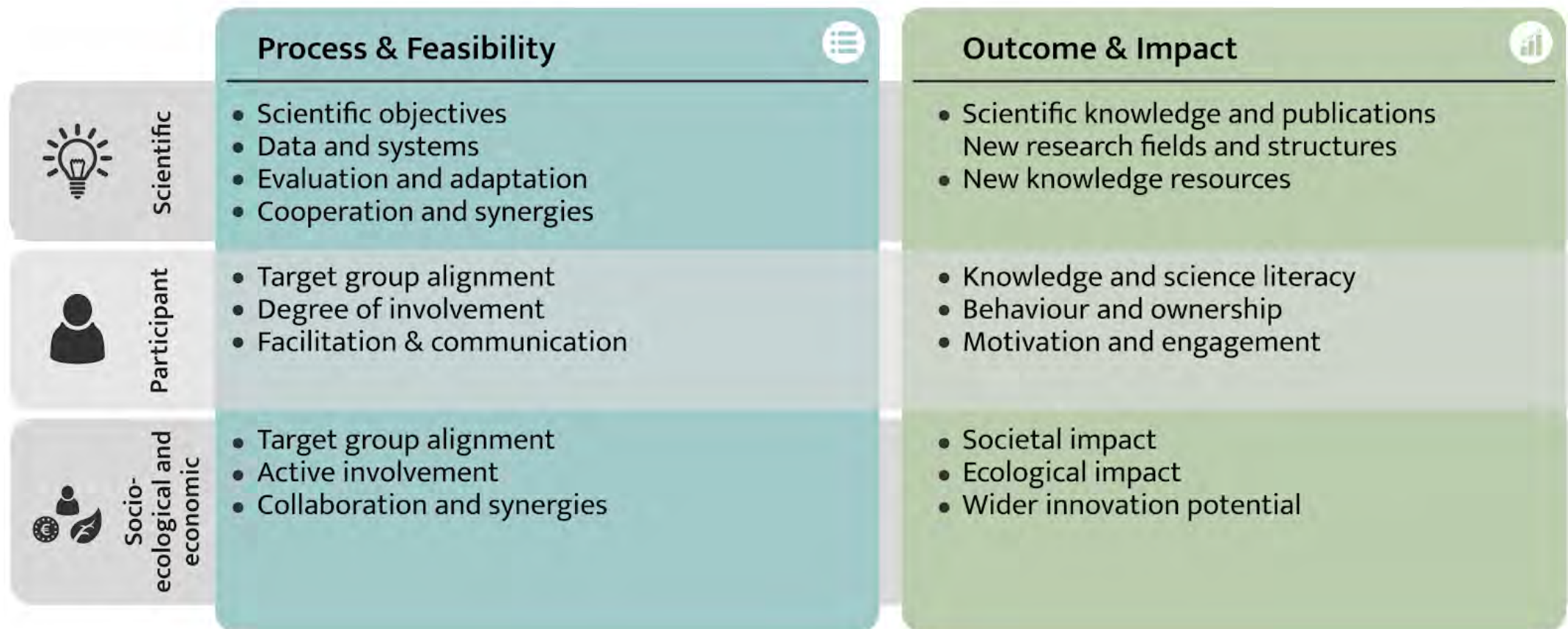
- 1 • Stakeholder engagement plan.
- 2 • Evaluation of stakeholders' expectations, needs and goals.
- 3 • Definition of outcomes, balancing stakeholders' interests.
- 4 • Project design and participation strategy in accordance with outcomes (potential involvement of stakeholders).
- 5 • Deciding data governance model, privacy measures and agreement for recognition and authorship (involving stakeholders in evaluation or decision-making).
- 6 • Promise to the public, includes expected outcomes, participants and stakeholders' role in the project, data governance, privacy, recognition, etc.
- 7 • Dissemination plan.
- 8 • Disseminate the promise to the public for transparency.
- 9 • Continuous evaluation plan and two-way feedback mechanism to adjust participation strategies to evolving interests during project execution.
- 10 • Communication of how participants input affected outcomes and decisions. Evaluation of the commitment to the promise for accountability.



Chapter 25: Evaluation in Citizen Science: The Art of Tracing a Moving Target



# Dimension of Evaluation in Citizen Science





Scientific

## Scientific Dimension

### Numbers of publications: widest applied output indicator

- Highest in the fields of ornithology, astronomy, meteorology and microbiology and in CS projects on digital platforms, eg. GalaxyZoo, Foldit
- Lower numbers in humanities: other priorities, publishing outcomes in newspaper articles, television, or social media, reaching out to a wider audience and influencing local policies?

### Other outcome indicators with anecdotal evidence:

- trustful relationships between members of society and the scientific community
- enhanced capacity for the joint analysis of scientific findings
- Increased skills in science communication for scientists





Participant

## Participants Dimension

**Direct learning (increased content knowledge and scientific literacy): most documented outcomes**

- Learning is often informal and incidental
- Citizen Science community is an important place for learning
- Learning is also stimulated via trainings organised for

**Additional transformative aspects of learning: selected reports, e.g.**

- Increased sense of empowerment,
- Higher care for residential environment
- Increased Citizen activism
- Insights into one's values and interest

 Framework for evaluation of learning outcomes (content knowledge, self-efficacy, behavioural change) (Phillips et al. 2018)





# Socio-Ecological and Economic Dimension

## Cascading individual outcomes to whole regions and communities

- Individuals act as promoters in their social networks,
- Individuals raise political participation
- Individuals collectively increase their capacity to reorganize and adapt to changes

## Air quality Citizen Science projects report about:

- Higher sense of community
- Stimulated discussions
- Influence on political decisions

*"... a shift in social expectations and in the balance of information is already happening, from one which favors government and large institutions, to a more egalitarian and democratic relationship driven by citizen access to objective, independent information of high quality which has been generated by the citizens themselves." p.98, Brown et al., 2016*





# Current Practices and Tools

## Wide range of tools and practices applied:

- Surveys: most frequent instrument to collect evidence for learning outcomes
- Interviews: structured, semi-structured and explorative to understand participant motivations, engagement activities, and benefits
- Narrative interviews combined with instruments like photo essays, research diaries, or storyboards to reveal the context-based, tacit and intangible factors involved in personal outcomes
- “Embedded assessment”, with a series of games or quizzes as part of the Citizen Science activity to collect insights on participants’ increased skills and knowledge in playful ways
- Content analysis: Analysis of comments shared by and amongst online citizen scientists to measure in how far citizen scientists adopted technical terms in their language as a sign of new knowledge gain



# What is missing?

What about integrating multiple perspectives in the design of the evaluation strategy and evaluation instruments and with that creating a more socially robust project as a whole?

## Co-Evaluation

is a form of participatory evaluation that initiates the conversation on **expectations, objectives and impact already at the start of the project**, either when the research design is co-created with different stakeholders, or at least, when the participation of actors is negotiated. The main difference between co-evaluation and conventional types of research evaluation is that participants are also **involved in the decision on project goals and evaluation instruments**.

*... for an evaluation that matters!*



# Co-Evaluation: Learning from Participatory Evaluation

All types of participatory evaluation are characterised by a **research process based on partnership between the evaluators and those actors who were part of the research process and those who put the results into practice**. Participatory evaluation aims not only to determine the benefits and impact of a project, but also has the objective to initiate and facilitate learning and therefore also focuses on the processes themselves.



The goal is to research with (not on) participants by involving them as co-researchers, positioning them as authorities of their own experiences and further developing their awareness of systemic issues to move them to social action (Participatory Action Research)

## Co-Evaluation

Inspired by participatory research concept of “co-researchers” and understanding of knowledge as “co-production”.



[https://www.betterevaluation.org/en/plan/approach/participatory\\_evaluation](https://www.betterevaluation.org/en/plan/approach/participatory_evaluation)

Co-production is shorthand for the proposition that the ways in which we know and represent the world (both nature and society) are inseparable from the ways in which we chose to live in. (Sheila Jasanoff)



# Co-Evaluation Principles



<b>Participant ownership</b>	Evaluation is oriented to the needs of the participants in an inclusive and balanced way. Participants take certain actions and responsibilities for project outcomes and their assessment.
<b>Openness and reflexivity</b>	Participants meet to communicate and negotiate to reach a consensus on evaluation results, solve problems, and make plans for the improvement of the project, evaluation approaches, and impact measures; input should be balanced and representation should be guaranteed for all involved stakeholders
<b>Transformation</b>	Emphasis is on identification of lessons learned, improvement of benefits and wellbeing, for all participants.
<b>Flexibility</b>	Co-evaluation design is flexible and determined (to the extent possible) during the group processes. The mix of formats and methods used should reflect the project aims and potentially empower marginalised perspectives.
<b>Documentation and transparency</b>	Whenever possible and ethically desirable, evaluation procedures should be documented and made accessible to participants, or even the wider public.
<b>Timing</b>	Co-evaluation has to start as early as possible, but latest during the negotiation of research questions and design of methodology.

Main characteristics of co-evaluation, adapted from (Patton, 2008)



# Co-Evaluation Steps Across The Co-Research Process

- Co-design of evaluation strategy
- Monitoring: tools for continuous observation and discussion
- Interpretation: feedback cycles, adaptations, reporting and structured analysis
- Valuation: Assessing the value of the outcomes and lessons learned



Adapted from <https://civitas-sunrise.eu/>



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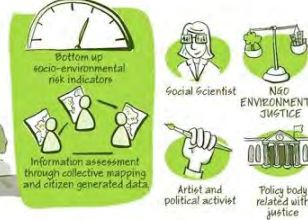
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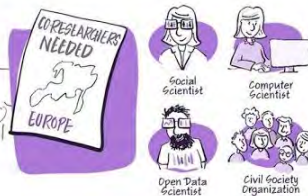
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Gender Equality is a concern globally shared.



## Co-Evaluation in CoAct

... addressing social global concerns related to mental health care, youth employment, environmental justice and gender equality by engaging citizens as co-researchers.

... understanding Citizen Social Science as participatory research methodology co-designed and directly driven by citizen groups sharing a social concern.



The CoAct project has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No. 873048



# Co-Evaluation Instruments in CoAct

... across cases

- Indicator matrix
- Co-evaluation roadmap
- Cross-case learnings

	<b>Co-Researchers &amp; Citizen Scientists</b>	<b>CoAct Professional Researchers</b>	<b>Knowledge Coalition</b>
<b>Output</b>			
<b>Intermediate outcome</b>			
<b>Long-term outcome</b>			

*CoAct cases indicator matrix*



# Co-Evaluation Instruments in CoAct

## ... case specific

- Co-evaluation toolbox

	Direct data	Indirect data
Qualitative data	Interviews, focus groups Cultural probes Experience sampling Mappings, network maps Workshop evaluation	Content analysis of messages shared in our digital platforms
Quantitative data	Experience sampling Questionnaire Workshop evaluation	Access statistics to our digital platforms



# Co-Evaluation Instruments

## ... examples



Individual reflection sheets as part of the research diary

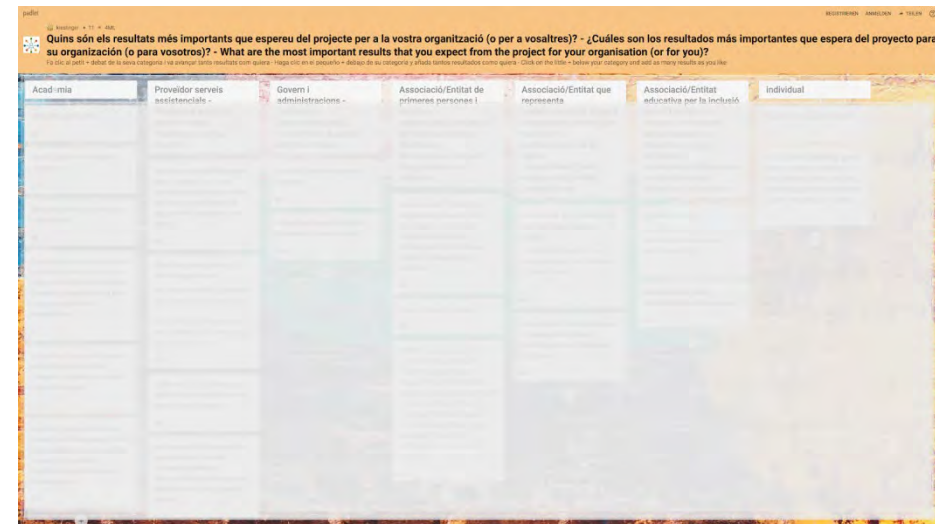
9. Reflexions

mental organització col·laboració suport visualització en línia xarxa social sessió vídeo salut mental històries pluja d'idees idees moderador diari tècnica equip

Comparteix aquí les teves reflexions per ajudar-nos a millorar el procés de coreerca:

Al teu parer, com a persona coinvestigadora, què ha funcionat bé del projecte?

Al teu parer, com a persona coinvestigadora, què és el que no ha funcionat tan bé?

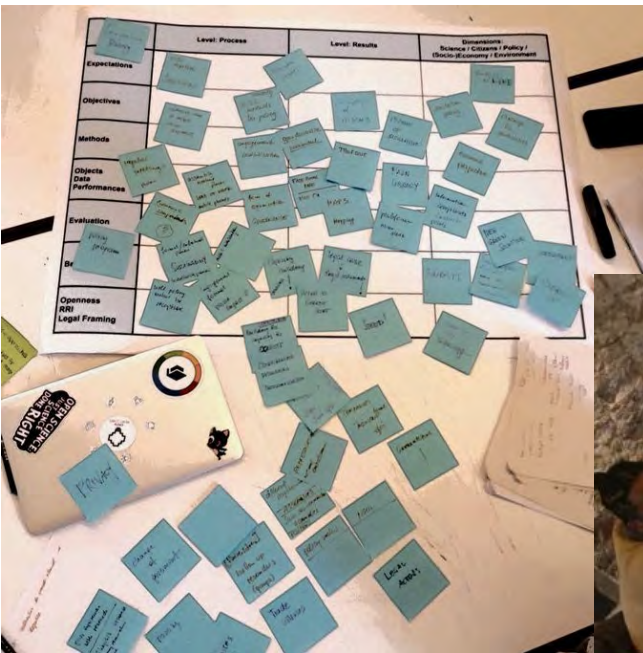


Reflections on project expectations as part of workshops



# Co-Evaluation during Covid-19

... from physical interventions



... to digital



effects on

- research topic itself/shift in social concerns
- research process
- co-research input
- co-research output



## Open Questions and Limits

- Data privacy regulations restrict data-exchange between researchers and the co-evaluation team
- Language issues when working with citizens across regions
- Misconception of “evaluation” as “being evaluated” instead of “evaluating” the project
- Project dynamics: uncertainty - flexibility in the research process while maintaining research integrity
- Overload of tasks and responsibilities of participants /and researchers)



## Further Resources #1



European Citizen Science Association. Supports the participation of the general public in research processes – across science, social science, humanities and the arts. <https://ecsa.citizen-science.net/>



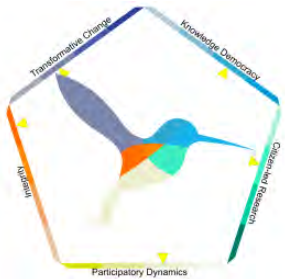
Online platform for sharing knowledge, tools, training and resources for Citizen Science – by the community, for the community. <https://eu-citizen.science/>



A EU-funded project dedicated to Measuring Impact of Citizen Science. Recommendations about the assessment of the impact of citizen science (January 2021). Citizen-science model for impact-evaluation research (August 2021). <https://mics.tools/>



## Further Resources #2



InSPIRES: Open platform where Citizen Science projects can introduce themselves and conduct a self-assessment.

<https://inspiresproject.com/>

The **Cornell** Lab of Ornithology

User's Guide for Evaluating Learning Outcomes from Citizen Science, including templates, checklists etc.

[https://www.birds.cornell.edu/citizenscience/wp-content/uploads/2018/10/USERS-GUIDE\\_linked.pdf](https://www.birds.cornell.edu/citizenscience/wp-content/uploads/2018/10/USERS-GUIDE_linked.pdf)



ACTION-project impact framework, toolkit and masterclasses.

<https://actionproject.eu/about/>



## Questions for the Q&A after the panel discussion

- Do you have experience in co-designing the evaluation strategy with different stakeholders?
- Have you done so already at the beginning of a project? What were the benefits and the challenges for you?
- Do you have experience with alternative methods (e.g. open evaluation, peer-interviews, diaries, storytelling, etc.)







**TRANSFORMATION  
INTO CONCRETE  
ACTIONS**

# Short Break



# Panel Discussion

## Conversations on experiences



# Further Webinar Agenda

Min	Section	Description
40	<p><b>Conversations on experiences</b></p> <p>Katie Richards-Schuster, Obialunanma Nnaobi, Johannes Jäger, Anna Cigarini</p>	Discussants share their experiences with participatory evaluation in brief lightning presentations. Then the discussion will revolve around challenges and benefits of such evaluation (informed consent, ownership, overload, ..) and options and (potential) instruments for co-evaluation
25	Discussion/Q&A	Discussion of questions posted to the chat
10	Feedback and Sendoff	Feedback session



# Introducing the Speakers



Anna Cigarini  
University of Barcelona IEA Paris/Paris-Saclay  
CoAct



Johannes Jäger  
IEA Paris/Paris-Saclay



Obialunanma Nnaobi  
Vilsquare



Katie Richards-Schuster  
University of Michigan



# Introducing the Speakers



*„Participatory research with young people is important because young people are experts in their lives, and their lived experience can and must shape knowledge developed about them and their communities.“*

**Katie Richards-Schuster**, Ph.D., is an Associate Professor and Director of Undergraduate Minor Programs at the University of Michigan School of Social Work in Ann Arbor, MI, USA. Her research focuses on understanding the strategies and approaches for engaging young people in communities, the contexts and environments that facilitate youth engagement across settings, and the impact of youth participation in creating community change. She has worked in and with communities to promote youth participation and has led national and global efforts to increase youth voice in research and evaluation. She is a leading scholar in using participatory research and evaluation approaches with young people and communities and is the former co-chair of the Youth Focused Evaluation TIG within the American Evaluation Association.

<https://ssw.umich.edu/faculty/profiles/tenure-track/kers>



# Introducing the Speakers



**Obialunanna Nnaobi** is a development practitioner whose work combines elements of research, strategy and advocacy to support good governance causes, innovative use of technology and the empowerment of women and youth. As Co-founder at [Vilsquare](#), she works with a wide range of partners to deliver on pan-African solutions to the continent's infrastructural challenges. She has held key positions in multi-stakeholder initiatives in Nigeria like the Open Government Partnership (OGP) where she supports diverse stakeholders to collaboratively achieve shared accountability objectives and development targets. Twitter: @nmannaobi @vilsquare

<https://vilsquare.org/makershub/>

*„I realized early that having (all) stakeholders contribute to designing and implementing programme M&E systems leads to better understanding of the intervention, strengthens ownership, improves accountability and gives voice to the most vulnerable. The stakeholders own the process and are “Champions” in its implementation.“*



# Introducing the Speakers



**Johannes Jaeger** is an evolutionary systems biologist and philosopher. He is interested in developing a theory of knowledge that is tailored to open science, inspired by his work on organismic agency and innovation in biological evolution. He is the current D'Alembert Research Chair at the Université Paris-Saclay and the Institut d'Études Avancées (IEA) de Paris, and associate faculty at the Complexity Science Hub (CSH) Vienna. Twitter: @yoginho

[www.johannesjaeger.eu](http://www.johannesjaeger.eu)

*„We must move away from metric madness, from our obsession with outcomes, towards a process-oriented form of evaluation that is tightly integrated with teaching, mentoring, and facilitation.“*



# Introducing the Speakers



**Anna Cigarini** is a PhD candidate in information and knowledge society at Universitat Oberta de Catalunya. She is a member of [OpenSystems](#) (Universitat de Barcelona) in the [CoAct](#) project, and collaborator at [Dimmons](#) (Universitat Oberta de Catalunya). She holds a MsC in sociology and demography, a MsC in population studies and a BsC in statistics. Anna is interested in the intersection of the technical and social aspects of technology. In particular, her research focuses on the governance of citizen sciences' communities of practice.

Twitter: @anna\_cigarini, @OpenSystemsUB, @dimmonsnet

*„Considering evaluation as an integrated research activity and establishing a structured dialogue with participants since the very beginning beyond objective and quantifiable measures is crucial to build trust and mutual understanding, and thus a reflective evaluation capacity.“*





# Questions and Comments



## Sample questions for the Q&A after the panel discussion

- What are your experiences in co-designing evaluation strategies with different stakeholders?
- Have you included stakeholders already at the beginning of a project? What were the benefits and the challenges for you?
- Do you have experience with alternative methods (e.g. open evaluation, peer-interviews, diaries, storytelling, etc.)

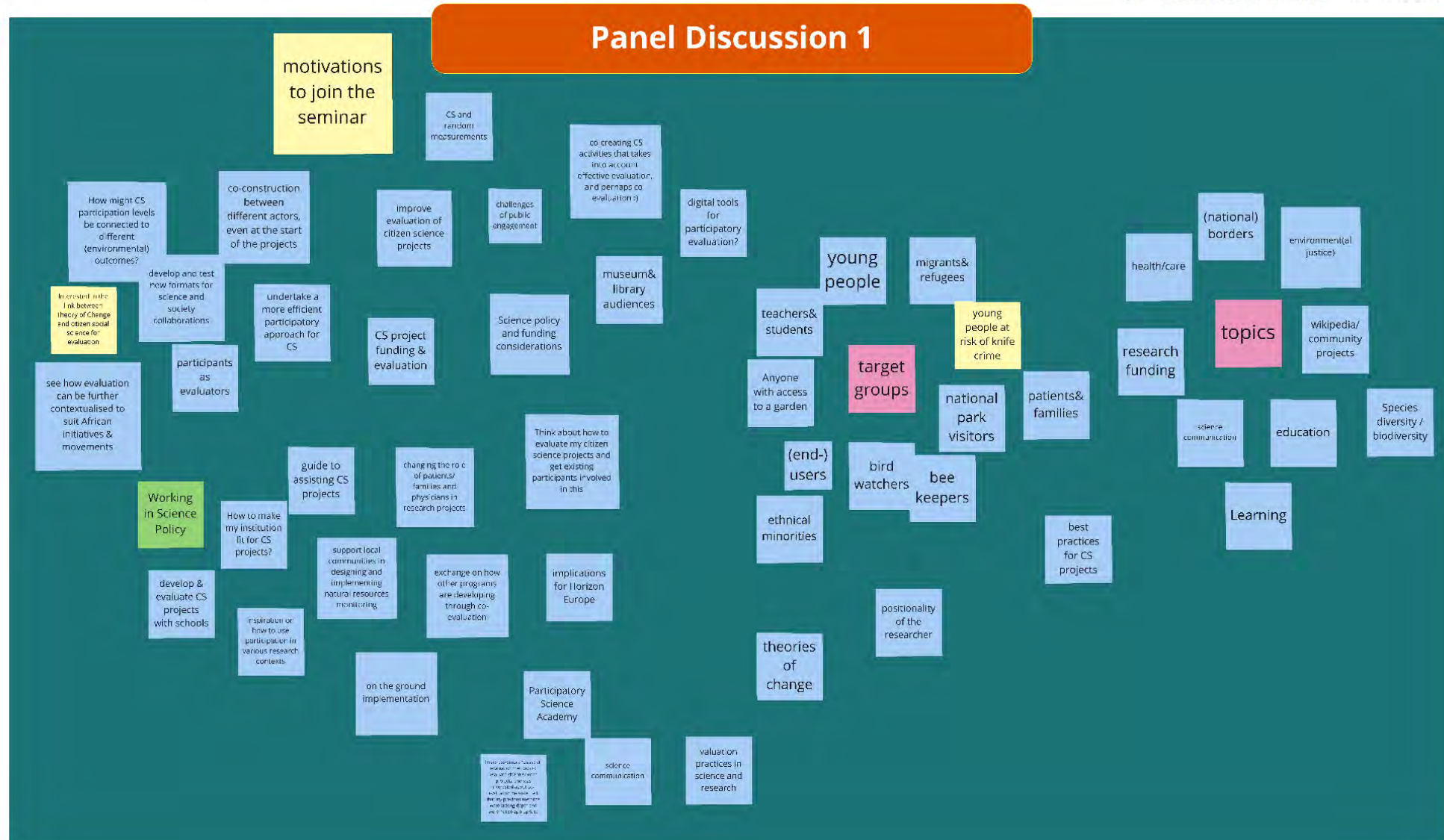


## Sample questions for the Q&A after the panel discussion

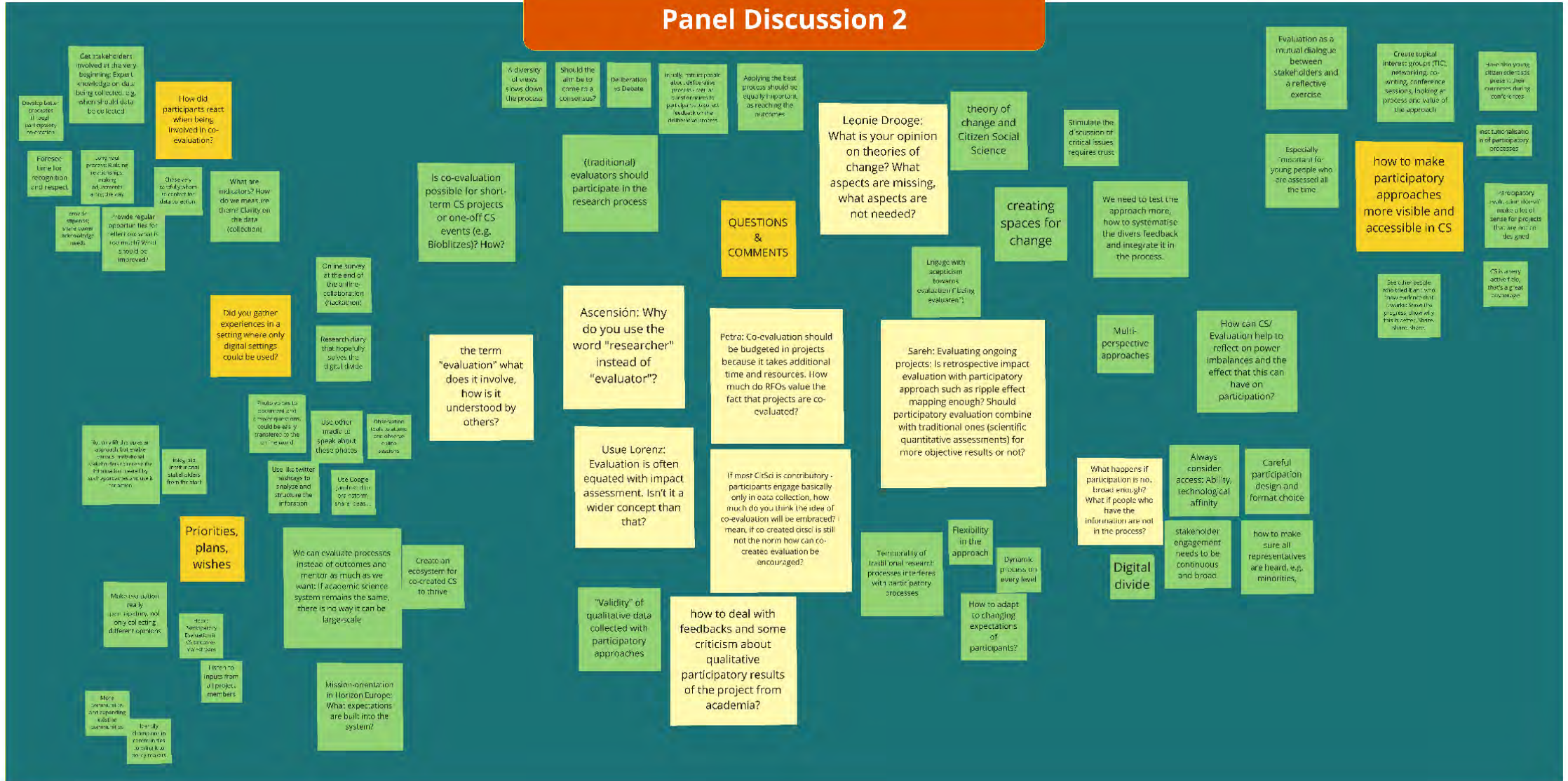
- How do we make participatory approaches to evaluation more visible and accepted in Citizen Science?
- What experiences do you have with moving evaluation activities to digital spaces?
- What are your plans and wishes for the future of participatory evaluation?



# Conversations



## Panel Discussion 2



# Feedback and Sendoff

Which concrete inputs and insights do you take from the webinar?

Co-evaluation is time-consuming but necessary, especially in CS (Lakobalovska)

General approach to co-evaluation and participatory tools

Limitations of Co-evaluation in CSS: time limits, overload of tasks => which are the alternatives?

This provided me the encouragement and confidence to try co-evaluation, particularly with teachers and students

Overview of co-evaluation in CSS

Evaluation can be done WITH and not ON participants)

What was surprising?

Some of our newer research will address this on our next webinar

Also, we are very interested in any other needs to better focus on research

So much developed so far. Lot to review!

Some confusion between research and evaluation, they are not the same thing

Co-evaluation might be really valued the process of the discussion and also learning, across perspectives, communities or practices and different solutions for the evaluation participatory evaluation.

Is it a prerequisite to approach evaluation in a co-creation way to be considered as CSS?

What have you missed? What should we improve?

Maybe breakout rooms for more active discussions around certain topics

Critical points, pitfalls, failor

Real case. A practical case maybe?

It would be great to see a bit more about how participatory evaluation works in practice - go to learn from experiences of having done it with real life evaluation was a silver one lesson

Additional Articles and resources are appreciated!

the panel was a bit difficult to follow since the speaker videos were very small

What should be next steps or future focus areas in co-evaluation?

Funding

The question Anna brought up: how to systematise all the different expectations

perhaps collaboration concepts so much to be found in ComSci further the CSS community could be on the right track or provide already existing criteria dynamics

Discussions about funding would be really useful to share learning/support around this

Developing a toolkit for CS practitioners, perhaps including a standardised common framework that can be used no matter the type of CS activity is going to be evaluated

Tips on writing this work into grants

Additional working groups to support each other in designing these projects

being very conscious in regards to diversity you have in shaping such approach

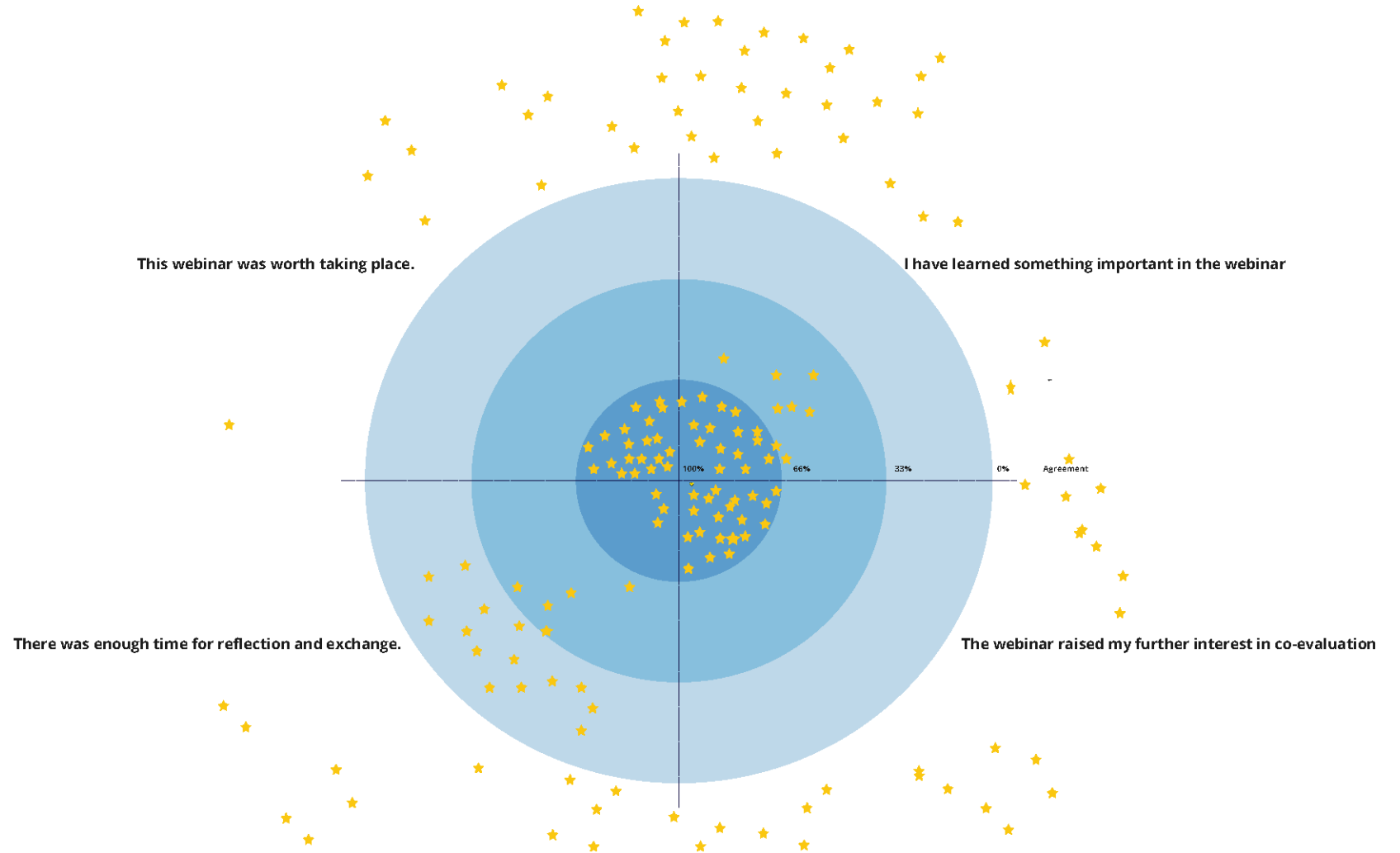
Engage those communities already being further in co-creation/co-innovation etc. processes

More practical cases and learnings from them



How would you rate the following 4 Statements. Please set your stars, on a range between 0-100% agreement.

# Feedback and Sendoff



Let's  
**C**  **Act**

**Thank you**

[www.coactproject.eu](http://www.coactproject.eu)

[coact@zsi.at](mailto:coact@zsi.at)



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