Learnings from the INOS Project
Integrating Open and Citizen Science into Higher Education Learning Approaches

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LIBER Europe

INTEGRATING OPEN AND CITIZEN SCIENCE INTO ACTIVE LEARNING APPROACHES IN HIGHER EDUCATION

The INOS Project

"Integrating Open and Citizen Science into Active Learning Approaches in Higher Education" , 2019-2022

➤ We aim to:

  ➤ **MODERNISE** Higher Education curricula

  ➤ **UPSKILL** Higher Education academic and library staff, and students

Pedagogical grounding

inos-project.eu

AALBORG UNIVERSITY
DENMARK

université de BORDEAUX

LIBER
LIBER

UNIVERSITY OF OULU

TALLINN UNIVERSITY

Web2Learn
Open. social learning

Project outputs

1 — **Evidence-based overview of trends in OS (and CS) public activities and HEIs role**

2 — **Solidify OS (and CS) practice** through solid pedagogical grounding from well-tested active learning approaches

3 — **Encourage collaboration between citizens, HE staff and students** in knowledge creation activities

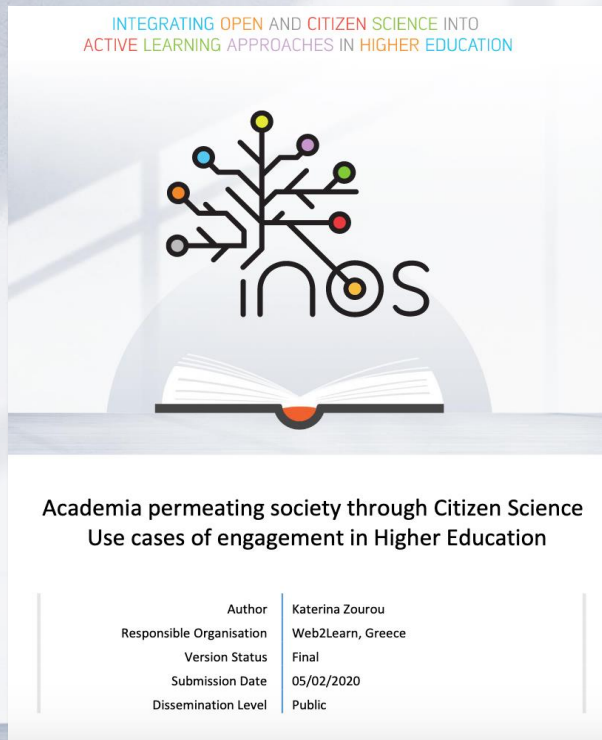**4** — **Encourage collaboration and multidisciplinary approaches between students and HE staff**

5 — **Upskill HE staff (academic and library) and students**

6 — **Trigger policy change** by raising awareness on societal impact from OS (and CS) inside and outside HEIs

Analysing common features across Open Science projects

Results of a landscape analysis of 20 OS projects

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Academia permeating society through Citizen Science
Use cases of engagement in Higher Education

Author	Katerina Zourou
Responsible Organisation	Web2Learn, Greece
Version Status	Final
Submission Date	05/02/2020
Dissemination Level	Public

1. Epidemium
2. Aalborg University's Megaprojects
3. Collecting litter and data to combat plastic pollution in Denmark
4. Tallinn University LIFE projects
5. Ocean i3
6. Project Discovery: Citizen science with Eve Online
7. Citizen science activities organised by Tartu University Natural Science Museum
8. #DataOnTheStreets Rally and the Better Budget Dataquest
9. iScape Living Labs
10. Mosquito Alert

11. NASA's GLOBE Observer
12. Smartfin
13. Europeana Transcribathon
14. Flint Water Study
15. Open Seventeen
16. Open source electric vehicle
17. DigiEduHack
18. Climathon
19. AirCitizen
20. Citizen science in Helsinki's Central Park

https://inos-project.eu/wp-content/uploads/2020/02/INOS_O1A1_v1.pdf

Co-funded by the
Erasmus+ Programme
of the European Union

9 WAYS TO INTEGRATE OPEN & CITIZEN SCIENCE INTO ACTIVE LEARNING APPROACHES IN HIGHER EDUCATION

The INOS Project

Open Science & Citizen Science are key catalysts in shaping research and society in the European Union and the world.

The INOS Project aims to modernize Higher Education Institutions' curricula through civic engagement in Open & Citizen Science.

Consortium

Co-funded by the Erasmus+ Programme of the European Union

ALBORG UNIVERSITY · université de BORDEAUX · LIBER · UNIVERSITY OF OULU · TALLINN UNIVERSITY · Web2Learn

1 Engage with university students to meet ambitious social objectives.

Whereas university staff may be involved in Open & Citizen Science projects, university students are much less involved.

2 Adopt innovative approaches in academic engagement for civil society.

Academic & library staff should go beyond mainstream solutions to reach out to new, ground-breaking initiatives.

4 Develop curricula that embrace Citizen Science, Open Science & public participation in shaping science.

Include Open & Citizen Science in higher education curricula as a means to mainstream it in university learning & teaching practice.

3 Involve academic & library staff in the design and implementation of Citizen & Open Science.

Adopt more diversified roles at various stages of Open and Citizen Science projects, beyond the 'observer' role of scientific validation or external evaluation.

5 Support local communities seeking scientific advice.

Collaboration between scientists & citizens is of critical importance in addressing complex issues, such as environmental justice & public health advocacy.

6 Extend Open and Citizen Science projects to many stakeholders.

Broad collaboration is needed to tackle social issues.

8 Engage in Open Innovation.

Universities & their libraries are expected to commit to new knowledge creation, thus becoming a key source of innovation in society.

7 Build trust & sustainability by including citizens.

Higher Education Institutions & academic libraries should look beyond the end of an Open/Citizen Science project: take sustainability measures, strengthen community uptake & build trust with volunteers.

9 Leverage the role of universities in financial transparency initiatives.

Social movements asking for more financial transparency on national & global levels should be supported by universities through Open & Citizen Science.

Learn more at inos-project.eu

https://inos-project.eu/wp-content/uploads/2022/11/9-ways-to-integrate-OS-and-CS-with-active-learning-approaches-in-HE.png

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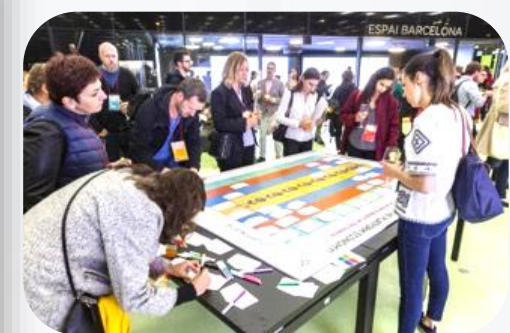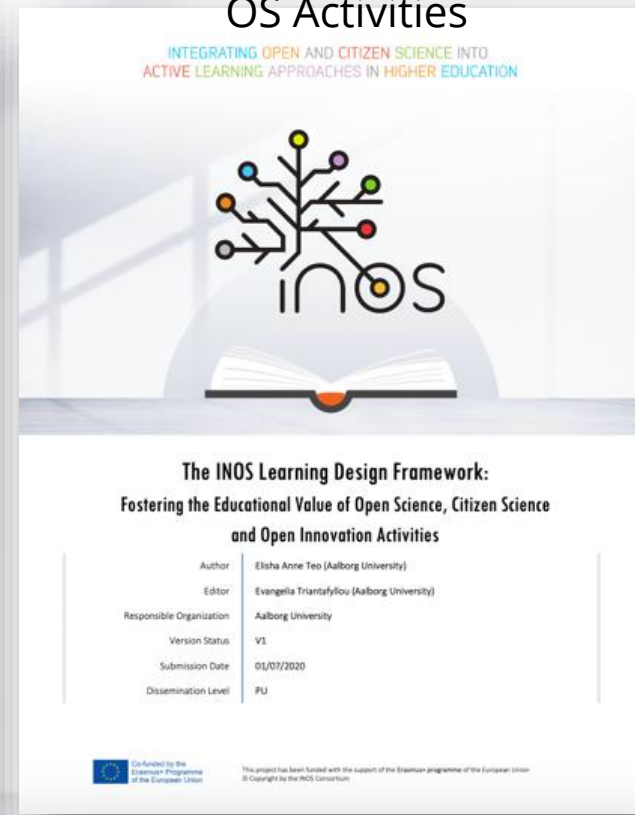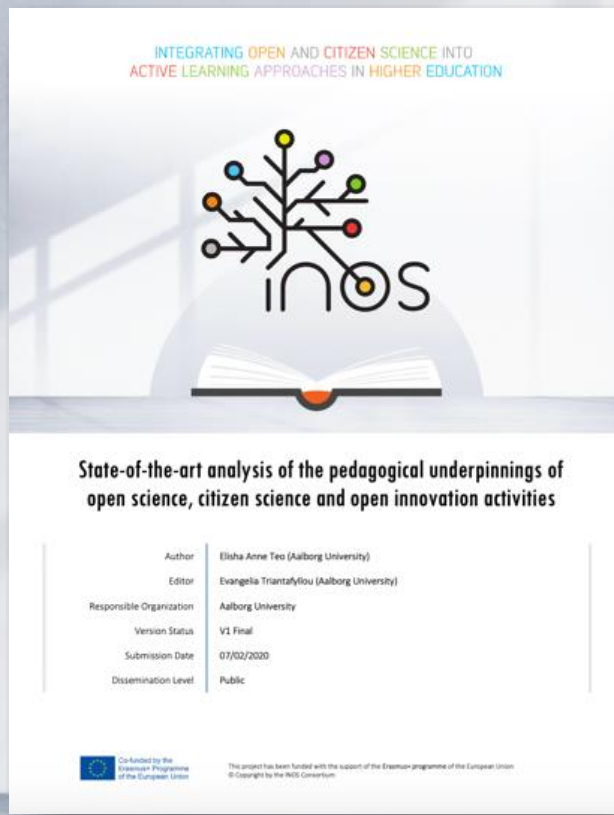
6 **Trigger policy change** by raising awareness on societal impact from OS (and CS) inside and outside HEIs

A learning design approach
(to shape OS at HEIs and beyond)

Analysis of case studies

Framework and guidelines for organising OS Activities

~20 Pilot events (2020-2022)

https://inos-project.eu/wp-content/uploads/2020/03/INOS_O2A1_SOTA_V1.pdf

https://inos-project.eu/wp-content/uploads/2020/07/INOS_O2A3_LearningFramework_V1.pdf

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https://zenodo.org/record/6411355#.Y3Ns-3bMI2z

https://zenodo.org/record/6967329#.Y3Ns8HbMI2x

OKAs and OIAs

Co-funded by the
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of the European Union

DIGI EDU HACK

Ocean i3

Ocean i3 is a university project of educational innovation with the territory and for the sustainability of the oceans that was born in 2018 and is co-financed by the ERDF through the INTERREG-POCTEFA programme for the years 2020-21

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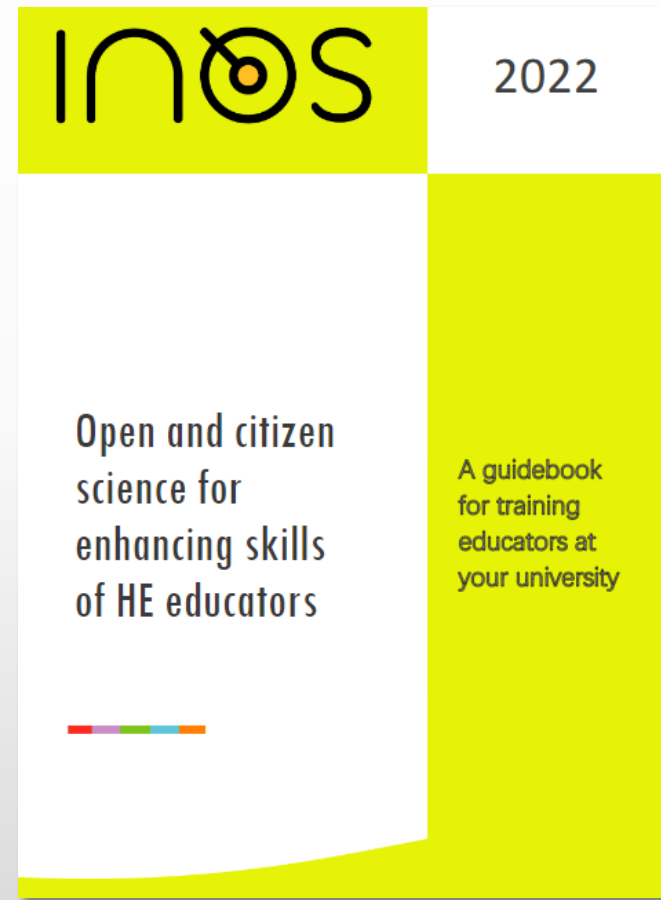**5** — **Upskill HE staff (academic and library) and students**

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Upskilling HE staff (academic and library) and students

Report on feedback from OS activities

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Report on upskilling HE academics, students and library staff through OS with a focus on skills and innovation potential.

Author	Azusa Nakata (University of Oulu)
Responsible Organisations	University of Oulu
Version Status	Final
Submission Date	29/08/2022
Dissemination Level	Public

Guidebook based on report

iNOS 2022

Open and citizen science for enhancing skills of HE educators

A guidebook for training educators at your university

https://zenodo.org/record/7034595#.Y3Nv6nbMI2x   https://zenodo.org/record/6511743#.Y3NwFXbMI2x

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Co-creating a shared vision with key stakeholders

Co-creating a Shared Vision for Citizen Science in Higher Education: Pitfalls and Recommendations

⬇

Roadmap for Capacity Building on OS and CS for research libraries

⬇

Report on Stakeholder Consultation

⬇

Vision and Policy Recommendations

https://inos-project.eu/project-activities/

Cultural and Policy Change for an Open Future

> 'cultural change requires more than a series of actions. Change can only take place where there is **trust, collaboration and commitment to a shared vision for the future**.'

LERU advice paper, Open Science and its role in universities: A roadmap for cultural change (2018)

https://www.leru.org/publications/open-science-and-its-role-in-universities-a-roadmap-for-cultural-change

Stakeholder Visions

#1 Utilise the role of (academic) libraries

#2 Reform the traditional structure of the HEI

#3 Reform of recognition and rewards systems

#4 Advocate, communicate and collaborate

Stakeholder Visions

#1 Utilise the role of (academic) libraries

SDU

UNIVERSITY OF
SOUTHERN DENMARK

University Library of Southern Denmark - at SDU
19 August at 07:40 · 🌐

A selection of our students after today's exam in SDU's Citizen Science Talent Program. With more than a little help from our friends - at home and abroad at📧🖤🙏 SDU's Knowledge Center for Citizen Science is part of your library 😊 See more at www.sdu.dk/cs

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UCL

Home   Study   Research   Innovation and enterprise   About   News   Events

UCL Home » UCL Division of Biosciences » Study » Masters » MSc Citizen Science

MSc Citizen Science

https://www.ucl.ac.uk/library/open-science-research-support/ucl-office-open-science-and-scholarship

https://www.sdu.dk/en/forskning/forskningsformidling/citizenscience

Stakeholder Visions

#2 Reform the traditional structure of the HEI

Citizen Science Lab

The Citizen Science Lab brings together researchers, citizens and societal organizations to create new knowledge for science ánd society.

https://www.universiteitleiden.nl/en/citizensciencelab

Stakeholder Visions

TRIPLE: Team Spirit as the default approach to working in academia

- TEAM
- RESEARCH
- IMPACT
- PROFESSIONAL PERFORMANCE
- LEADERSHIP
- EDUCATION

TRIPLE MODEL

#3 Reform of recognition and rewards systems

The TRIPLE system 'rewards teamwork by support staff and all others involved, and it will evaluate quality, real impact on academia and society, sharing, and openness to the world'

https://www.uu.nl/sites/default/files/UU-Recognition-and-Rewards-Vision.pdf

Stakeholder Visions

'Scholarship is a complex system. Open Science is even more complex. The transition to Open Science affects all stakeholders – universities, researchers, teachers, students, funders, publishers, policymakers and support organisations'

#4 Advocate, communicate and collaborate

Frits Ahlefeldt: https://fritsahlefeldt.com/
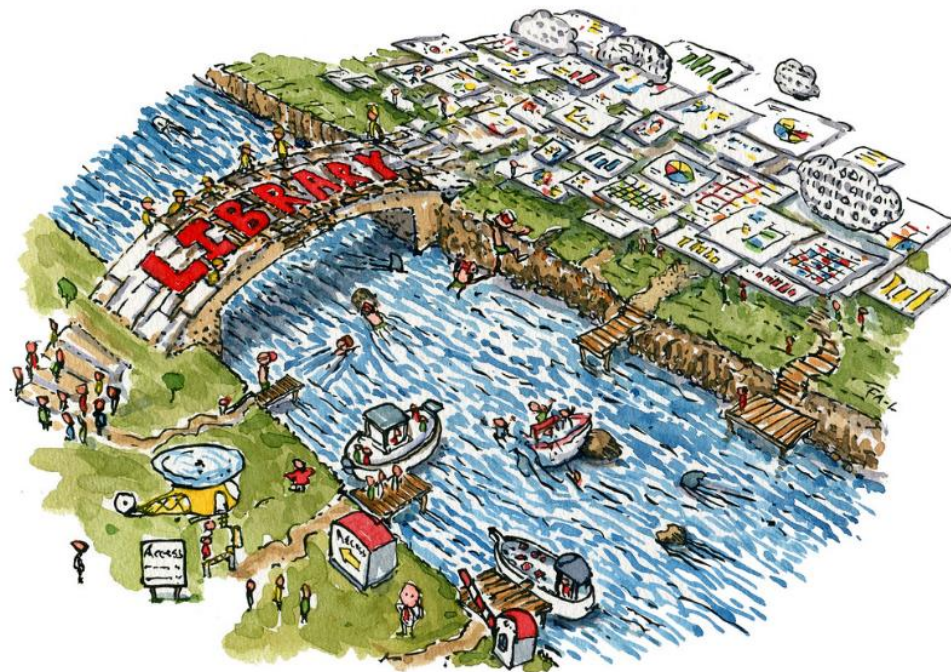
INOS and beyond – CeOS_SE Project

CeOS_SE
Citizen-Enhanced Open Science in Southeastern Europe Higher Education Knowledge Hubs

The CeOS_SE project aims **to raise awareness and mainstream Open Science (OS) and Citizen Science (CS) practices in Southeastern European countries**

https://ceosse-project.eu/

Twitter: @CeOS_SE

Let's keep in touch!

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Discover helpful resources ✓

Discover news ✓