OPENSCIENCE-FAIR-





### OSFAIR 2021 VIRTUAL CONFERENCE, 20-23 SEPTEMBER

An "engaged research" approach to design an open, online course in open science and open innovation for early career researchers

Michal Janicko, National Training Fund; Nicola Mountford, Maynooth University; Christian Dalsgaard, Aarhus University; Tara Cusack, University College Dublin; Zdenka Simova, National Training Fund; Eleni Makri, University College Dublin; Francesco Caviglia, Aarhus University; Søren Smedegaard Bengtsen, Aarhus University; Ciara Duignan, University College Dublin; Denise McGrath, University College Dublin;

Presenter: Dr. Eleni Makri, Research Scientist, UCD/Insight SFI Research Centre for **Data Analytics, Dublin, Ireland** 





# OPPORTUNITIES & EDUCATION IN NETWORKED INNOVATION FOR NEW GRADUATES WITH PHDS USING OPEN ONLINE RESOURCES



COORDINATOR UCD NUI MAYNOOTH

**IRELAND** 

**AARHUS U** 

**DENMARK** 

NATIONAL TRAINING FUND/NVF

**CZECH REP** 





### Kick-off Meeting Feb 2021

THIS PROJECT HAS
RECEIVED FUNDING FROM
THE EUROPEAN UNION'S
2020
SCIENCE WITH & FOR
SOCIETY PROGRAMME
UNDER GRANT AGREEMENT
NO 101006514





## OVERALL PURPOSE OF OPENING DOORS PROJECT



Co-design an online interdisciplinary, intersectoral & international educational course on <u>open science and open innovation</u> for PhD graduates (including support tool for PhD supervisors)

Aimed to Shape more innovative, socially aware, integrative and employable PhD & Postdoctoral researchers







### "ENGAGED RESEARCH" APPROACH

"Engaged research encompasses the different ways that researchers meaningfully interact with various stakeholders\* over any or all stages of a research process, from issue formulation, the production or co-creation of new knowledge, to knowledge evaluation and dissemination" (Holliman et al., 2015 p. 3 cited in Holliman 2017 p. 1)





# "AN ENGAGED RESEARCH" APPROACH WHY SO IMPORTANT FOR OD PROJECT?



OS/OI:

Relatively new & broad terms

Necessary to understand their meaning in diverse audiences, cross-culturally

Goal was to design for PhD, Postdocs, Employers in OI networks, and Educational Institutions

This means diverse needs and knowledge contributions requiring an engaged research approach







# "AN ENGAGED RESEARCH" APPROACH WHY SO IMPORTANT FOR OD PROJECT?

### ENGAGED RESEARCH IS A KEY ELEMENT OF OPEN SCIENCE-IT INVOLVES

- 1. Discovering and sharing goals that actors with different interests can tackle together
- 2. Considering ethical equity with special attention to empowering the 'smaller voices' e.g. PhD students

3. Facilitating meaningful dialogue

FOUR KEY PRINCIPLES OF CO-DESIGN

**Sharing power** 

**Prioritising relationships** 

Using participatory methods

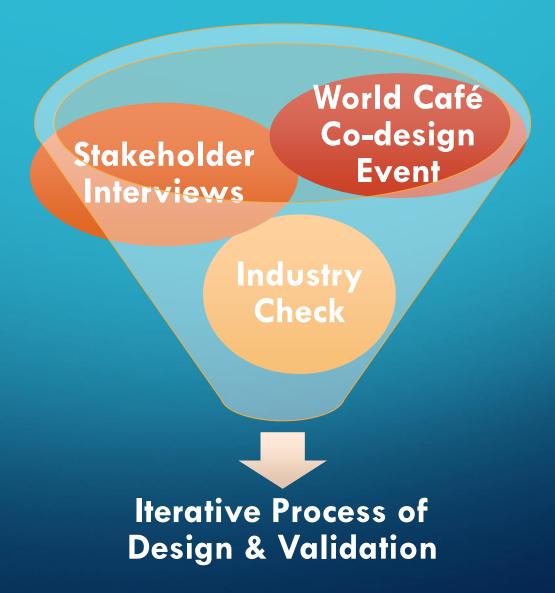
**Building capacity** 





### 3 "Engaged Research" Strategies used









#### CO-DESIGN



Collaborate

PhDs/Postdocs

PhD Educators

Industry Stakeholders

PhD Employers





### IMPORTANT ISSUES FOR CROSS-NATION STAKEHOLDER ENGAGEMENT



Standardized but flexible Interview Guide

Non-academic setting a "standard" target group for PhDs in Denmark

Not same in Ireland & Czech Republic

Language, translation & analysis





### "ENGAGED RESEARCH" IN OD ONLINE CO-DESIGN COURSE









#### **Research Data Collection**

Interviews with Employers, PhD Educators & PhD Students Involved in OI Networks



World Café Event with Research, Academic (incl. PhDs) & Non Academic Stakeholders

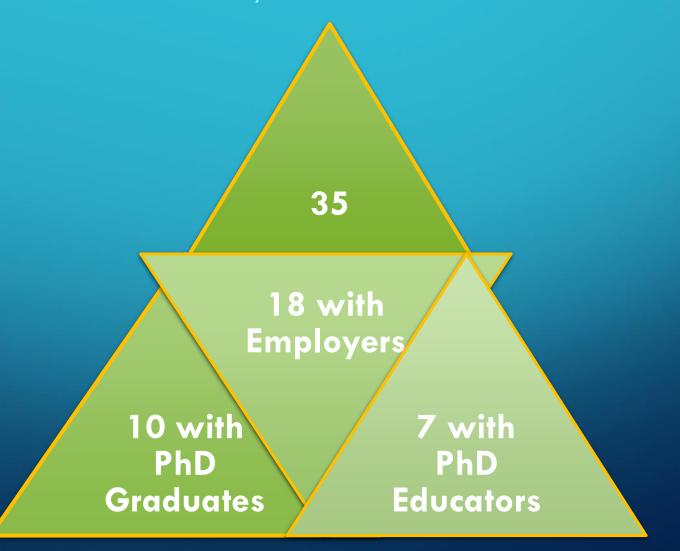




### **STAKEHOLDER INTERVIEWS**



### **ACROSS IRELAND/DENMARK & CZECH REPUBLIC**









### CHALLENGES ENCOUNTERED WITH ANALYSIS OF STAKEHOLDER INTERVIEWS

Diverse Perspectives 🗸



How to Synthesise this into Learning Outcomes

for a Training Course









#### **GENERIC LEARNING OUTCOMES**



### Collaborative & Interdisciplinary Research

Practical
Applicability of
Research

Realizing the value of involving the wider public in research

The use of OSapproaches, values & tools

Career Planning





### **WORLD CAFÉ EVENT**



21

attendees from Ireland, Denmark & Czech Republic

Equally divided to form 4 groups across 4 breakout rooms

Collaborative & Interdisciplinary Research

3. Creating a Module attractive to students

Based on 4 topics from Stakeholder Interviews

2. Applicability & Wide Communication of Research Results

4. OS tools





### PROCESS EVALUATION OF WORLD CAFÉ DYNAMICS



Triggering
Reflection/Dialogue

Always
Depending on
Group Members
(e.g. language,
background, etc.)

Time Allocation

Rephrasing/

Summarizing the essentials

Collaborative Knowledge Construction Google Drive shared Docs Collaborative Note Taking

Facilitating Att.
Motivation/
Engagement





### WORLD CAFÉ EVENT LEARNING OUTCOMES



**OPEN ONLINE COURSE** 

DRAFTED WITH A
PROPOSED COURSE
CURRICULUM &
LEARNING ACTIVITIES

TO EMPLOYERS

FEEDBACK &
RELEVANCE
TO OS/OI





#### **INDUSTRY CHECK**



### Insight SFI Research Centre for Data Analytics

Ireland

External Industry
Advisory
Committee

OD

Advisory Committee **Czech Republic** 

Non-academic Employers





### FINAL CURRICULUM PROPOSAL ENDED UP WITH



"ENGAGED"

COMPREHENSIVE & NUANCED UNDERSTANDING

**RESEARCH** 

Of OS & OI

APPROACH

FLIPPED CLASSROOM
CHALLENGE-BASED
CONNECTIVIST & CONSTRUCTIVIST TEACHING &
LEARNING FRAMEWORK





### HOW DID WE ADDRESS THE CO-DESIGN PRINCIPLES



**Sharing power** 

**Prioritising relationships** 

Using participatory methods

**Building capacity** 







#### REFERENCES USED



Holliman, Richard (2017). Supporting excellence in engaged research. Journal of Science Communication, 16(5) pp. 1–10.

Holliman, R., Adams, A., Blackman, T., Collins, T., Davies, G., Dibb, S., Grand, A., Holti, R., McKerlie, F., Mahony, N. and Wissenburg, A. (2015). An open research university: Final report. Milton Keynes, U.K.: The Open University. URL: http://oro.open.ac.uk/44255/.





### **VISIT & FOLLOW US**

https://openingdoors4phd.eu

@openingdoorseu









### Many thanks for your attention!

Happy to share any questions with you!

Dr. Eleni Makri Research Scientist, UCD/Insight SFI Research Centre for Data Analytics, Dublin, Ireland eleni.makri@insight-centre.org

