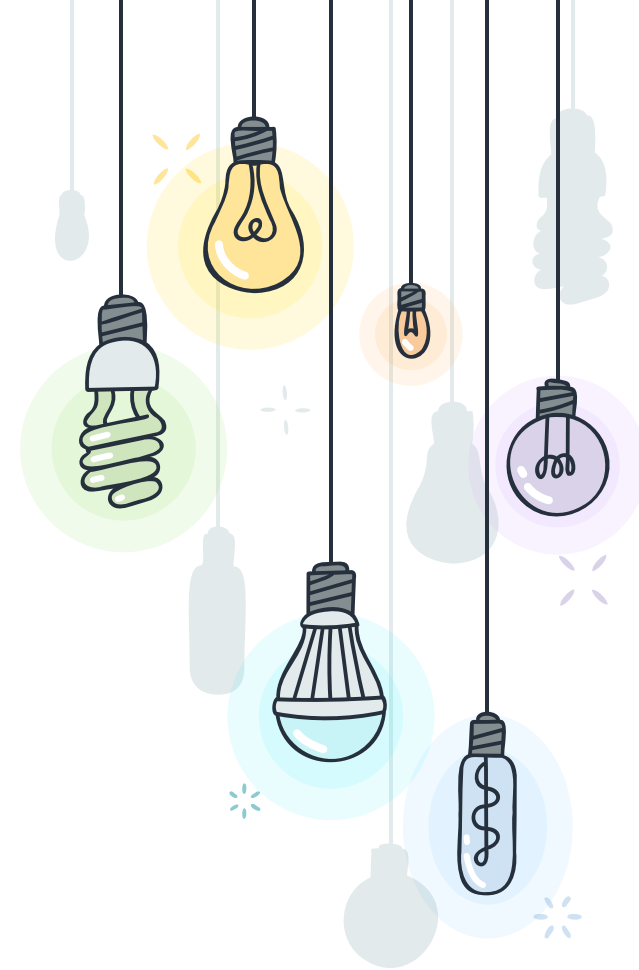


DESIGNING STRATEGIES AND ACTIONS TO SUPPORT OPEN SCIENCE:  
BUILDING CAPACITY IN AN ACADEMIC INSTITUTION

CARLOS LOPES, MARIA LUZ ANTUNES, TATIANA SANCHES

# \* CONTENTS

- + Context
- + Why this study
- + Open Science and stakeholders needs
- + A possible answer
  - × Methods
  - × Results
- + Conclusions



## \* CONTEXT

- + The access of information to new learning devices, the ability to interconnect with libraries and repositories without barriers of time or space, and the way in which information is processed and made available highlight the **urgency of reflection and access to the production and dissemination of scientific production by its stakeholders.**



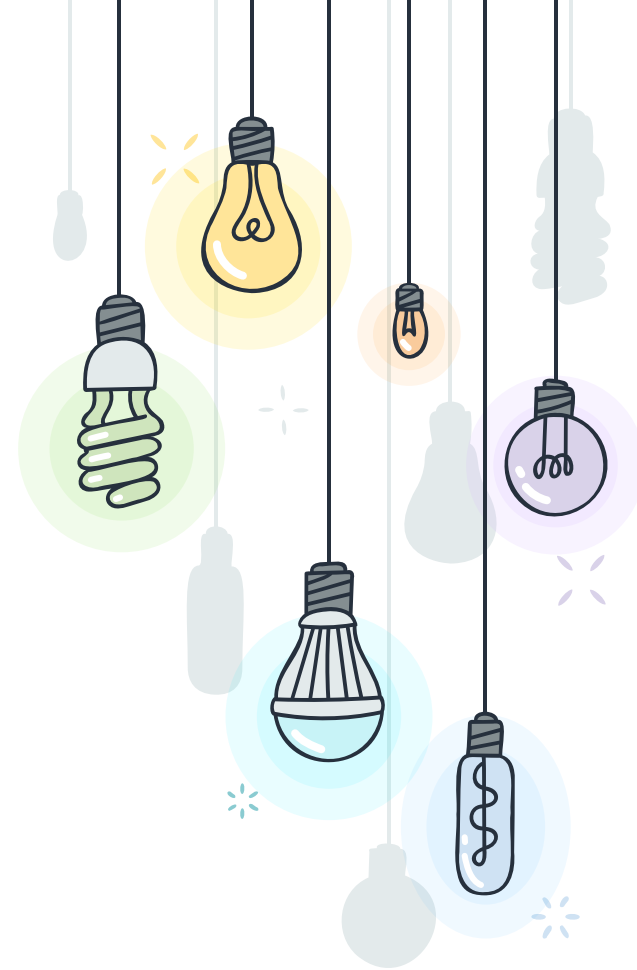
## \* CONTEXT

- + To address these issues, **academic institutions**, together with their **libraries**, can devise and develop **strategies** that enable them to make fuller use of these resources, assisting them to interact with the **Open Science movement** with greater autonomy and effectiveness.



## ✧ WHY THIS STUDY? – TO BUILT CAPACITY

A curricular proposal for a **postgraduate course** targeted at researchers, science managers, and information professionals is presented, given the gap in higher education offer in this area in Portugal.

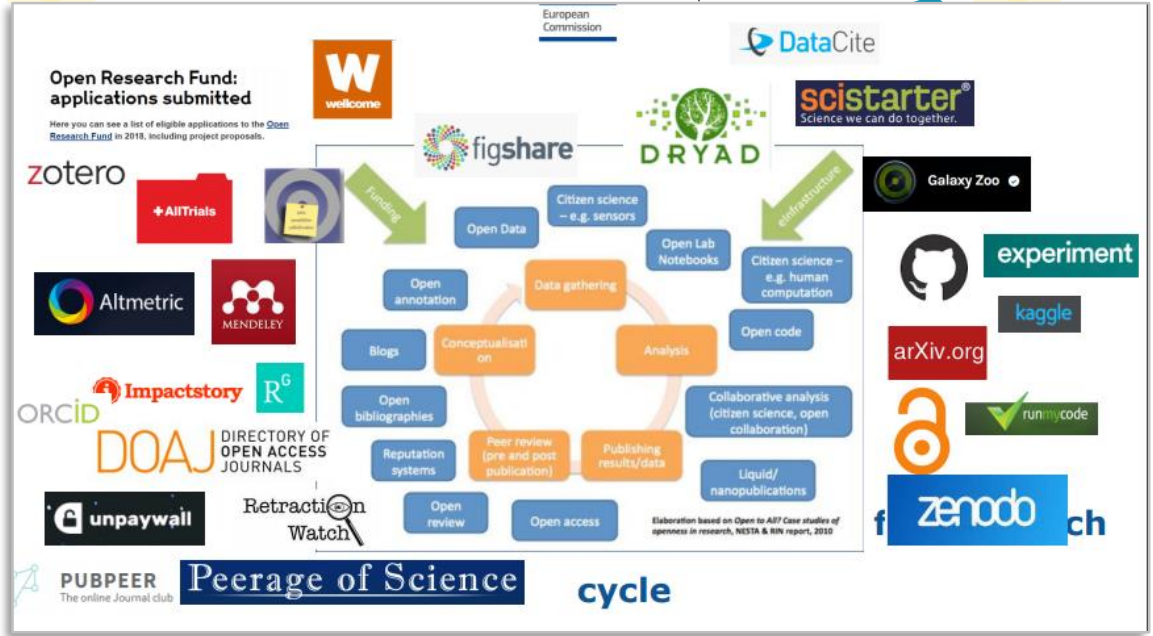




## OPEN SCIENCE

Includes open access, access to research data, data curation, information open sources, open peer reviews, and citizen science - in which information literacy intervenes in a solid way for full adequacy of the **Open Science principles** as an empowerment promoter.





Open Science requires, among others, **data management and curation skills** arising from global changes to the type and variety of data used in research

1

# WHAT CAN WE DO?

Building capacity



# \* FROM THEORY TO PRACTICE

## Exemples

OPEN SCIENCE TRAINING HANDBOOK offers guidance and resources for trainees and trainers on Open Science, suggesting methods, contents, and exercises

## Reality

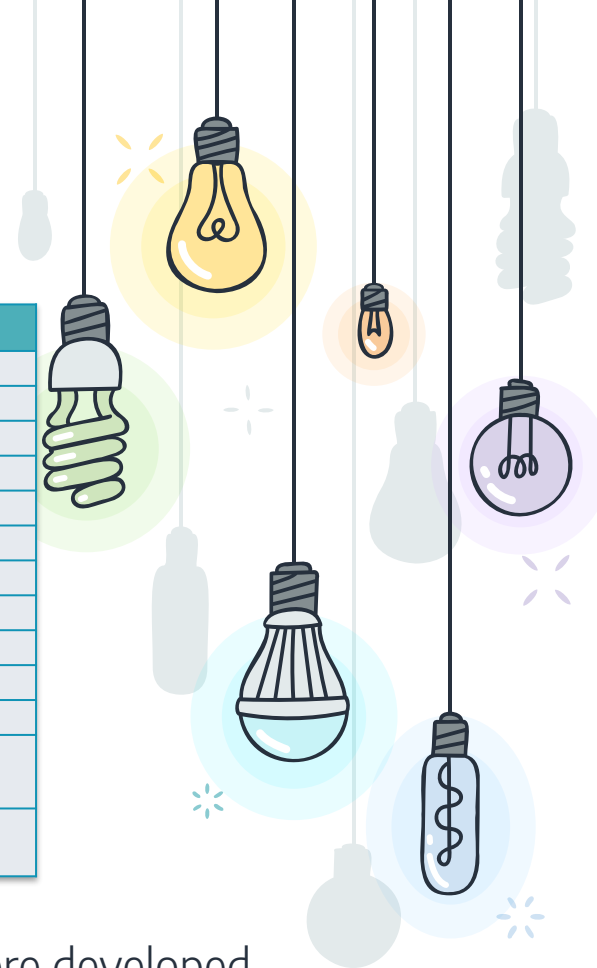
Open Science training, promoting professional skills is essential for supporting practices in this ecosystem, and improving levels of transparency and participation in research practices

## Take action

Inspired by this initiatives and aware that structured training in this subject remains scarce, the authors of the present study set out to build some training strategies for an academic institution



# \* FIRST TRAINING INITIATIVES



## Individual and autonomous training sessions

- International guidelines for information literacy [webinar]
- Information literacy in university contexts I: from research to publication [webinar]
- Information literacy in university contexts II: contributions to Open Science [webinar]
- Information literacy in university contexts III: a necessary intervention [webinar]
- Research resources [Summer course, since 2015]
- Predatory journals [webinar]
- New challenges for academic libraries in the face of COVID-19 [webinar]
- Easy and secure remote access to knowledge: OpenAthens [webinar]
- The PubMed new platform [webinar]
- New spaces and strategies for learning, digital fluency, and experimentation [workshop]
- Information literacy for fighting fake news [workshop]
- Practice communities for trainers and coordinators of literacy programs in academic libraries [webinar]
- The new information literacy framework: what it is and how to apply it [webinar]

Initially, autonomous, and free attendance training initiatives were developed, complemented by a strategy of **tutorial support to researchers**

# \* THE STUDY SEEKS TO ANSWER THE FOLLOWING QUESTIONS



1

1. How can researchers be empowered for Open Science?

2

2. How to articulate information literacy within the Open Science ecosystem?

3

3. What are the roles and relationships between stakeholders for Open Science best practices?

4

4. Can we design a postgraduate proposal about Open Science?

The aim of this study is to create postgraduate training for information professionals, researchers, and science managers in **the principles and best practices of Open Science** in the current information ecosystem

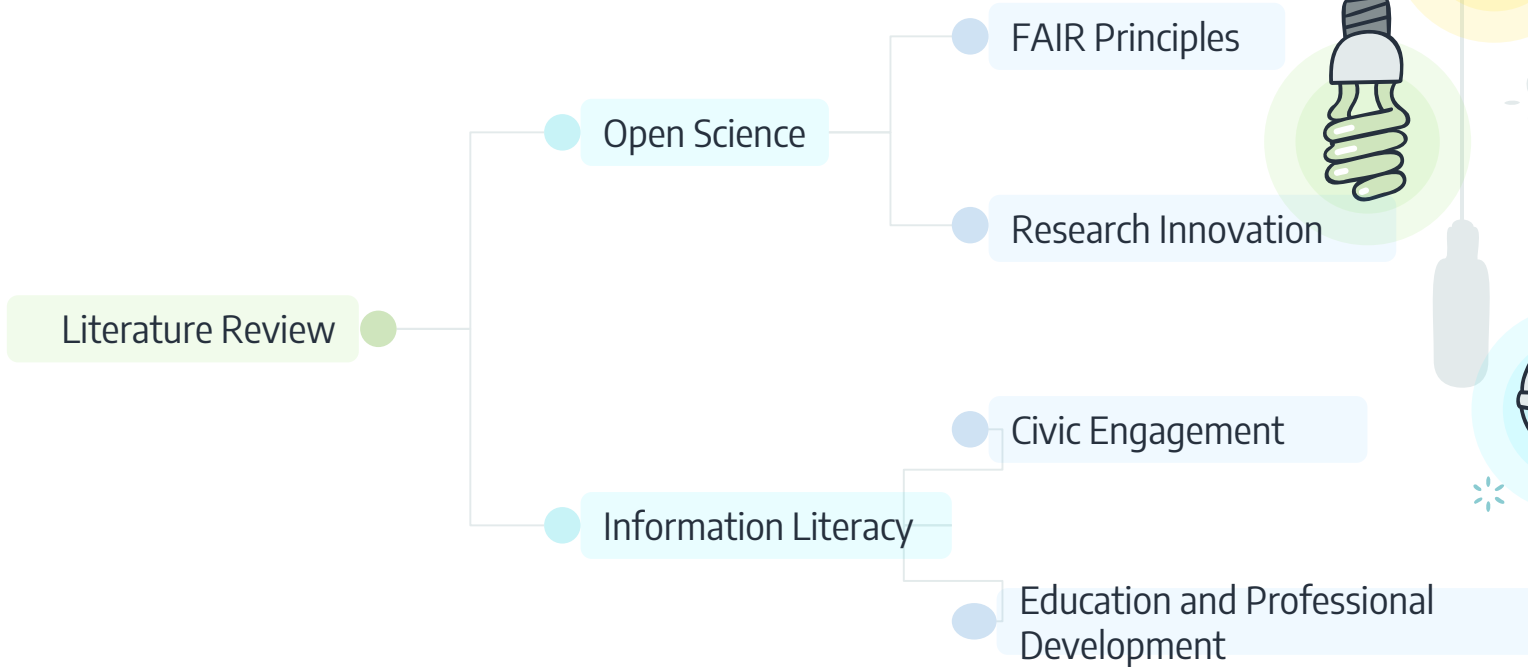
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HOW CAN WE DO IT?

Building capacity



# \* METHODS





In the conception of this **postgraduate course**, we sought to identify similar training offers, their relevance, feasibility, and adequacy to the market, determine objectives, audience, competencies to be acquired, detail programmatic contents, workloads, and ECTS attribution

3

## A PURPOSE

Building capacity



DESIGNED TO  
INFORMATION  
PROFESSIONALS,  
RESEARCHERS, AND  
SCIENCE MANAGERS



## POSTGRADUATION COURSE

Based on a holistic vision of learning, information, and the production and dissemination of knowledge in different media, the study plan has an interdisciplinary character, benefiting from concepts, models, theories, and techniques from complementary scientific domains.

In parallel, the course emphasizes **experiential, active, and open learning in the collaborative, participatory, and relational space.**





## CURRICULAR UNITS

1st semester (total of ECTS: 15.5)

- **Inaugural Conference** (1h/0.5 ECTS)
- **Open Science: concept, policies, and projects** (12h/4 ECTS)
- **Open Data: data management plan and research data curation** (9h/2.5 ECTS)
- **Open Educational Resources** (8h/2 ECTS)
- **Open Access and Citizen Science** (8h/2 ECTS)
- **Open Science Research Resources** (9h/2.5 ECTS)
- **Open Publishing: open editions and open sources** (8h/2 ECTS)

2nd semester (total of ECTS: 14.5)

- **Digital Competences** (10h/3 ECTS)
- **Media and Information Literacy: models, strategies and intervention** (9h/2.5 ECTS)
- **Academic and Scientific Writing** (10h/3 ECTS)
- **Creativity and Innovation** (8h/2 ECTS)
- **Thematic Seminars** (8h/2 ECTS)
- **Project Supervision Seminars** (8h/2 ECTS)

Curricular structure, organized in two semesters, with a **workload of 108 hours and 30 ECTS**

# \* SKILLS TO BE ACHIEVED

## Theory and practice of Open Science

Open access, open sources of information, open research data, data curation, and open peer review

## Diversifying resources

Critically use scientific and scholarly information in print, digital and multimedia environments

## Incorporating IL practices

Understand the relevance of information literacy to the achievement of Open Science

## Critical thinking

Develop critical thinking towards the ethical and legal issues surrounding the use and sharing of scientific and scholarly information in the Open Science environment

## Integrate scientific environment

Implement training in Open Science and its literacy in the academic and scientific environment

## Sources and methods

Identify relevant information sources and methodologies to carry out research work in the scope of Open Science, Integrating the policies issued by national and international science organizations





## CONCLUSIONS

The formal **proposal of a postgraduate course** aims to provide a training response to a comprehensive need, aligned with an understanding of the diversity of existing solutions for the development of Open Science in Portugal articulated with information literacy, providing those interested with a set of skills, knowledge, instruments and theoretical-practical tools for application and adaptation to specific situations in multiple environments – professional, academic, scientific, but also social.

# THANKS!

## Any questions?



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