KIOS Open Knowledge: A pillar for excellence

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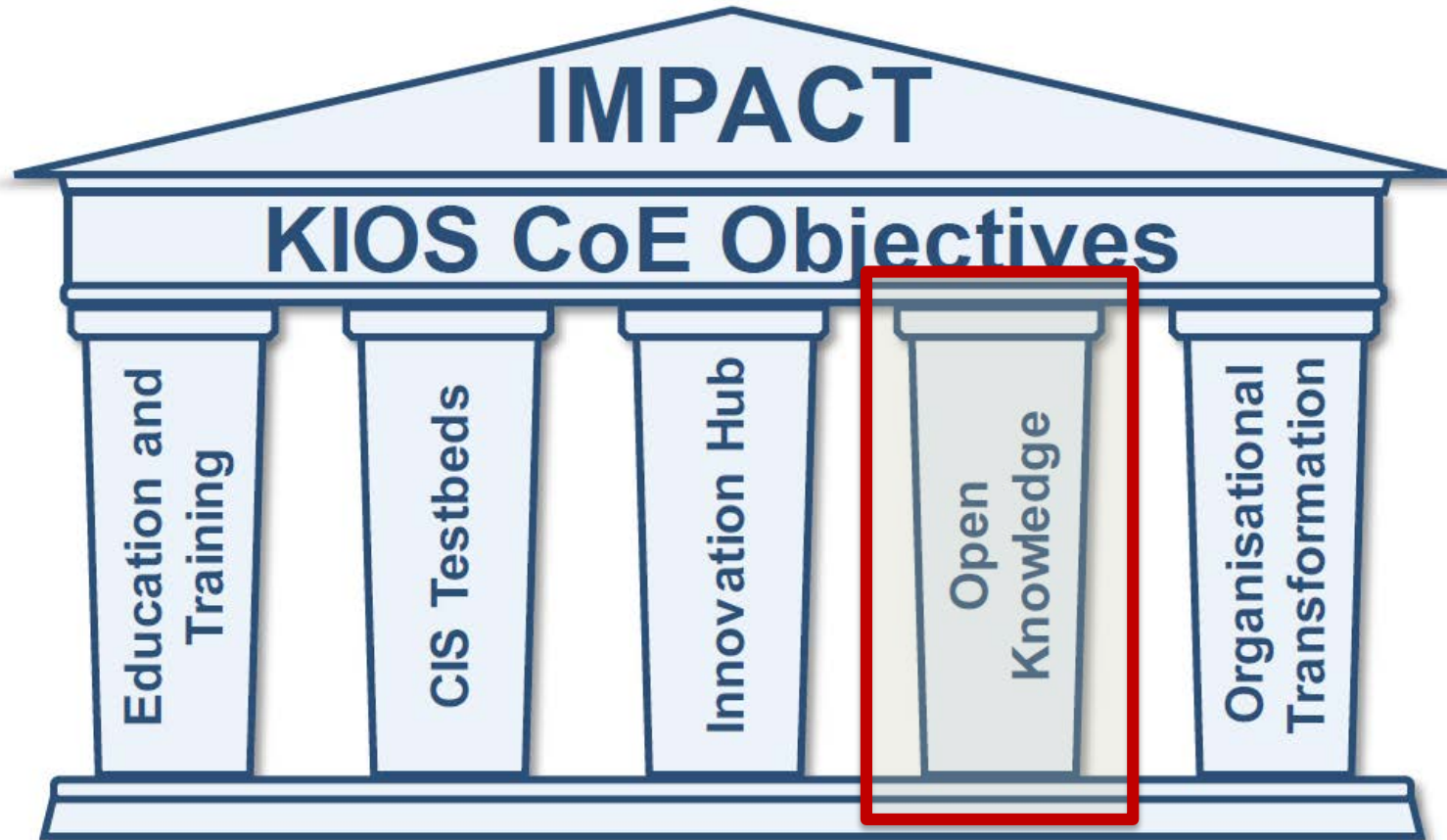
Imperial College London

KIOS Center of Excellence

- A research center within the University of Cyprus

- Over 100 researchers working in a multidisciplinary environment (~200 by 2023)

- Over 70 externally funded research projects since 2008

- Collaborations with industry and governmental organizations

- Excellent research record:
  - Publishing more than 100 papers, posters, and presentations per year

- KIOS CoE: A strategic partnership between the **University of Cyprus** and **Imperial College London**
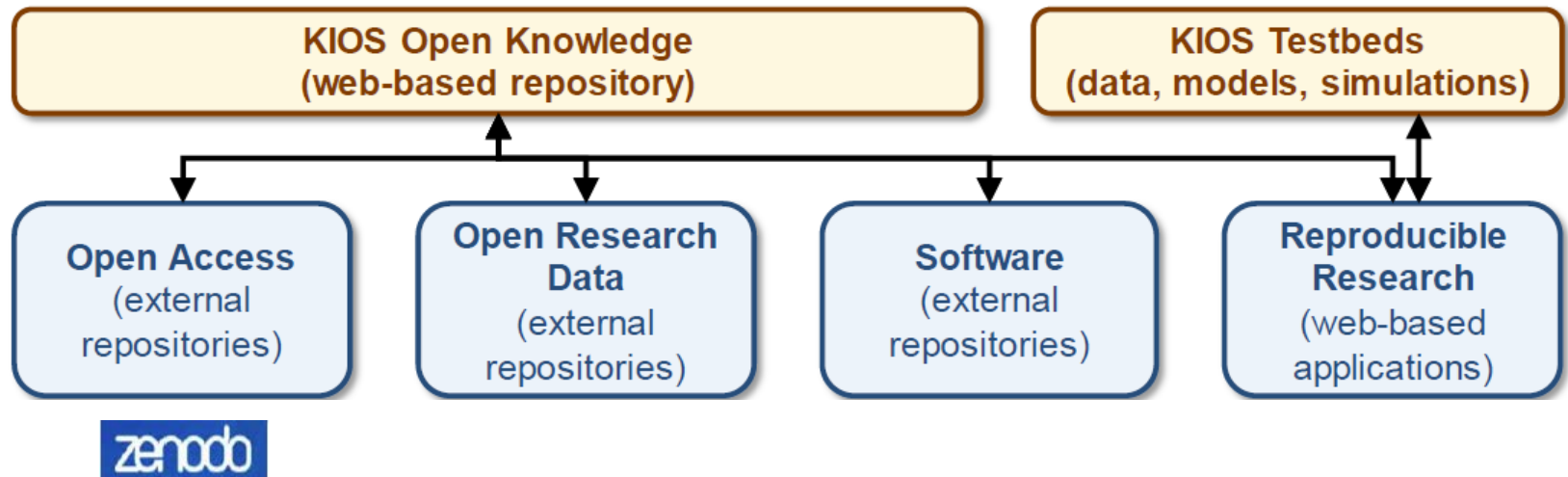
KIOS CoE Vision

To become a **world-class centre of excellence** for **multidisciplinary research** and **innovation** in the area of **intelligent systems and networks** with emphasis on **monitoring**, **control**, **management** and **security** of **critical infrastructures**, for the benefit of the society and economy of Cyprus and Europe.
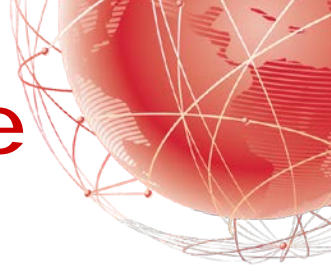
KIOS CoE Strategic Pillars

KIOS Open Knowledge

- Openly disseminate published scientific results beyond the traditional academic dissemination channels

- Data and code are made available

- Research results are reproducible

The Plan towards Open Knowledge

- Creation of the KIOS Open Access Committee
    - Consisting of 3 post-doctoral researchers

- Creation of an Open Access Policy covering the following:
    - Scientific publications
    - Research datasets
    - Software (code)
    - Reproducibility of the research results
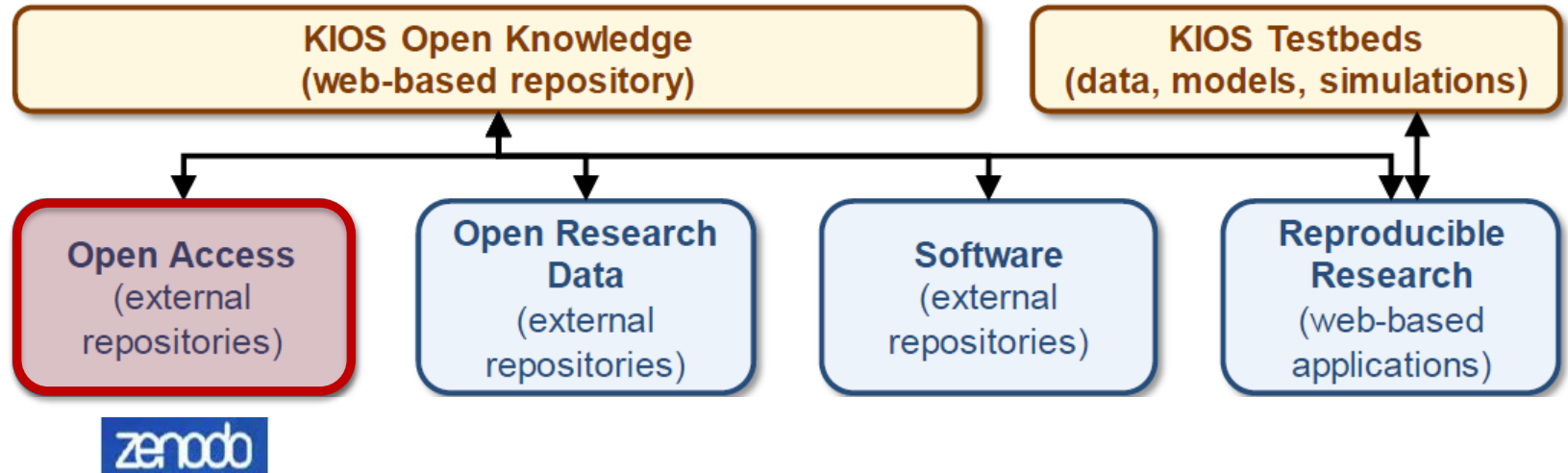
The Plan towards Open Knowledge

- Providing users' support
  - Clear step-by-step users' manual available online
  - Periodical presentations for the researchers
  - On-demand personal support

- Quality Control
  - Checking each upload to make sure it follows the policy

The Plan towards Open Knowledge

- Monitoring implementation progress
  - Development of automated software tools
    - ➤ Cross-checking open access uploads with papers appearing on Google scholar
    - ➤ Collecting information about the activity of the researchers at the portal

- Enforcing compliance
  - Thinking in progress

Open Access to Publications

Open Access to Publications

- Zenodo.org is our online platform of choice.

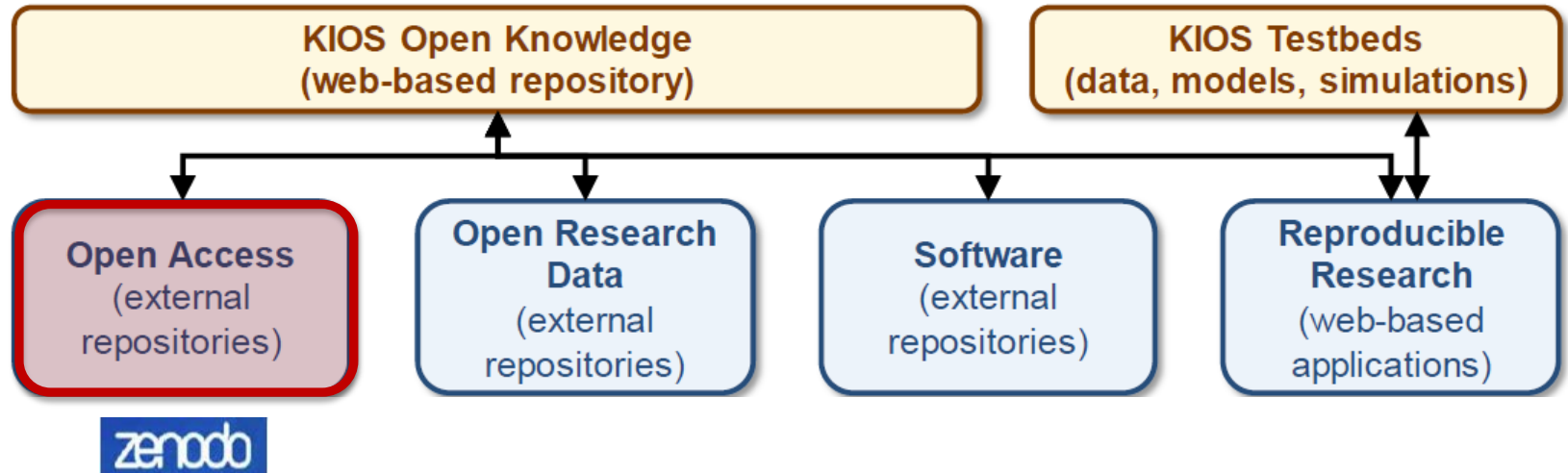- A KIOS CoE Zenodo Community is created – the "KIOS Open Knowledge Portal"

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KIOS CoE Open Knowledge Portal

🖇 All versions

Access Right

☐ Open (68)

File Type

☐ Pdf (66)
☐ Ppt (1)
☐ Zip (1)

Keywords

Found 68 results.

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March 12, 2018 (v1) Poster Open Access View

Tracking and identifying floating marine debris

Kylili Kyriaki; ⓘ Artusi Alessandro; Kyriakides Ioannis; Hadjistassou Constantinos;

It is estimated that a minimum of 5.25 trillion plastic objects weighing 268,940 tons are found in the world's oceans [1]. Techniques such as ship observations, net trawling and water filtration help estimate the amount of plastic debris at the local scale [2]. The main goal of this research i

Uploaded on April 24, 2018

July 13, 2017 (v1) Journal article Open Access View

Backscatter communications for wireless powered sensor networks with collision resolution

ⓘ Psomas, Constantinos; Krikidis, Ioannis;

Open Access to Publications

- Portal Features:
  - It qualifies as an open access repository for the EC

  - Linked to H2020 projects for automatic reporting

  - Can host many types of documents, e.g., publications, presentations, datasets, software, posters

  - Can link to other version of the document, i.e., to the publication in the publisher's website

  - Can link to other documents, e.g., software and datasets hosted in different repositories

  - Altmetrics for each paper
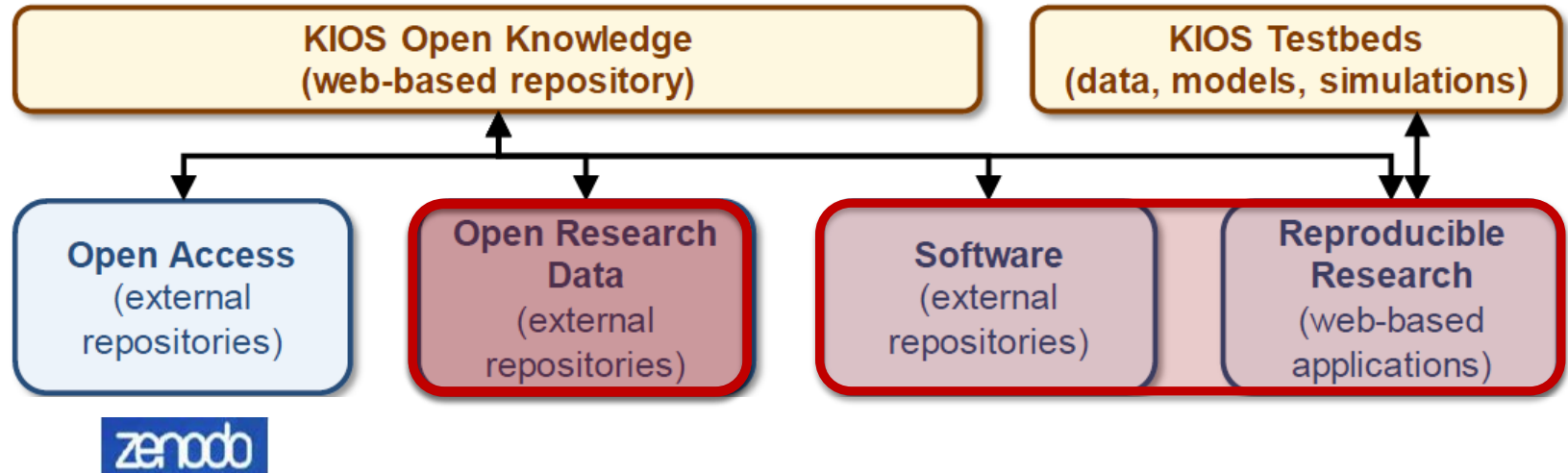
Open Access to Research Data

Open Access to Research Data

- **Making data freely available is far more complicated, in terms of rights and permissions**

- The KIOS Data Management Committee is responsible for the creation of a Data Management Plan for the center

- Currently, a repository is structured by the Data Management Committee to host all research data
  - The research data will be stored in this repository and their location will be linked from the corresponding publication entity in Zenodo

Open Access for Software / Reproducible Research

Open Access for Software / Reproducible Research

- **One step further than just providing open access to code**

- An online computational platform, instead of a software repository
  - Code and data will be uploaded to allow *anyone* to reproduce and repeat published scientific results without needing to have specific software licences.

- Code Ocean – a cloud-based computational reproducibility platform
  - Partnership between Code Ocean and IEEE – Link from publisher's website (IEEE) to Code Ocean
  - Link to Code Ocean from Zenodo

Why is Open Access Important?

- *As researchers*, we can access literature from wherever, without subscriptions

- *As authors*, our work becomes freely available to others
    - Increased visibility
    - More citations
    - Increased impact for our research

Why is Open Access Important?

- **Extending the concept to include Complementary Material, i.e., code and datasets, is of tremendous importance**

    - Code and datasets are generally not available (not a matter of subscription)

    - *Open datasets:* they are extremely valuable – necessary for research and not readily available

    - *Open software:* An actual enabler for others to build on-top of one's work
        - Increases research efficiency
        - For authors: Increases the impact of one's work

Challenges – Lessons Learned

- **Getting all researchers on board**

- Achieve compliance
  - Ultimate Goal: Open access procedures become part of a researcher's routine
  - Otherwise, personal reminders need to be sent by the Open Access Committee
    - ➢ Scalability issue as the number of researchers and publications increase

Challenges – Lessons Learned

- Enforce correct implementation of the policy
  - Many things must be done in a specific way, e.g., upload of correct document version, copyright note, funding acknowledgements, etc.

  - Personalized emails need to be sent in each case modifications are required

| Time spent for incorrect upload | >>> | Time spent for correct upload |

  - ➢ Again, scalability is an issue for a large research organization

Key Ingredients for Success

- Open Access to papers, research data and code is a key pillar for scientific excellence

- A research performing organization needs a group of people to dedicate some resources in acquiring expertise and guide the process

- Open Access for research data and code is far more complicated
  - The additional creation of a data management plan is a good practice

Key Ingredients for Success

- Researchers need to be trained and have easy access to clear guidelines

- Inventing ways to enforce compliance and correct implementation of the policy